the OIL AND GAS JOURNAL

Rates: Domestic, 1 year $6.00; 6 months, $3.00. Canadian and foreign, 1 year, $7.00; 6 months, $3.50. All subscriptions are payable in advance

OCTOBER 1, 1936
VOL. 35, NO. 20

Extra copies of special issues are reserved for subscribers' needs and may be purchased by subscribers at the price of 50 cents per copy

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Here's the Modern Way!

Use a BAKER CEMENT RETAINER

For SQUEEZE JOBS

A Sinton field operator says, "Being able to wash back and check cement put away with perfect safety is a wonderful feature."

Not only can high pressures be applied and the hazards of the ordinary tubing method eliminated but also the unusual can be met—with no additional equipment. Take the job in the Sinton field illustrated to the right. The 7" casing was ripped at the points shown. With a cement bridge in the hole just below those points, a cement retainer was run and set above them. Then 25 sacks of cement were squeezed into the formation. The Circulation Jar was lowered, circulation reversed and the hole washed back. About half the cement was returned, so another 25 sacks were squeezed in. AND—all mud ahead of and between batches was by-passed out through the Circulation Jar to prevent any contamination.

As a BRIDGE PLUG to test upper formations

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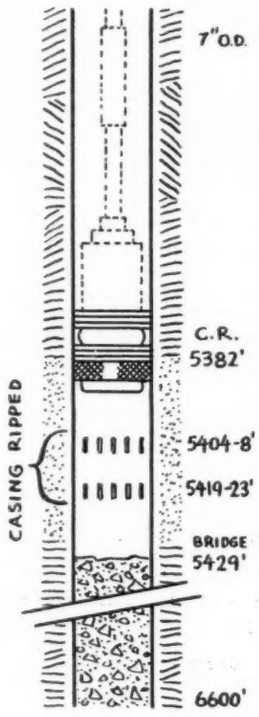

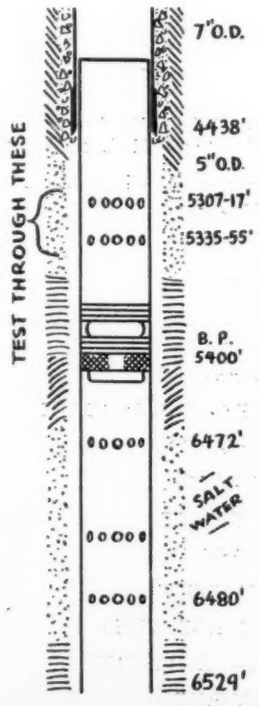

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The Cement Retainer has proved itself in meeting difficult cementing problems. Here are some of the types of jobs which it is performing every day in the Gulf Coast Territory alone.

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and Casing Bridge Plug

Heavy Output Continues Seventh Week

OIL producers in the United States last week for the seventh successive week maintained a production in excess of 3,000,000 barrels daily. The decline of only 10,923 barrels daily for the week indicates that when the final figures for September are available they will show the largest domestic production of any 30-day period in the history of the industry.

The month ended with all of the principal oil states producing in excess of recommendations of the Bureau of Mines with no indications that this situation will be changed in the early part of October. Despite the indicated demand figures of the government bureau, actual crude-oil requirements as determined by refinery purchases have not necessitated any general curtailment in crude production. One large crude buyer with plants in the Middle West predicts there will be little change in crude requirements so far as the major operators in that section are concerned until inland water transportation ends. He explains that while there has been a seasonal decline in gasoline consumption the larger refiners are maintaining their summer refinery operations in order to fill storage at water terminals before lake, canal and river transportation ends in November. He also cites government and A.P.I. figures to show that stocks of gasoline at these middle-western refineries are less than a year ago, and considering the increased demand they are now down to minimum working requirements. This is interpreted as additional evidence pointing to a heavy northbound movement of crude oil by pipe line over the next 60 days.

In regard to gasoline stocks, statisticians are pointing out that not only in the Middle West, but in all of the other principal refining areas with the exception of the East Coast and California, inventories are approximately the same as they were a year ago, or less. A comparison based on days' supplies is even more favorable for this year. California refiners profess not to be worried in regard to their gasoline stocks and there have been no indications of dumping in the eastern part of the United States, although prices are lower than they were during the summer months.

Production 3,024,323

Decrease 10,923

The 10-cent reduction in Michigan crude oil prices has brought protests from producers, and one refinery buyer has increased his price 5 cents per barrel. In the Mid-Continent several small refiners have reduced their plant runs although maintaining their normal crude-oil purchases. While Oklahoma and Kansas producers will attempt to keep October production within Bureau of Mines recommendations the Texas Railroad Commission on Tuesday announced a state allowable 54,000 barrels greater than September and 73,000 barrels greater than the bureau's estimated demand.

Daily Average Production for Week

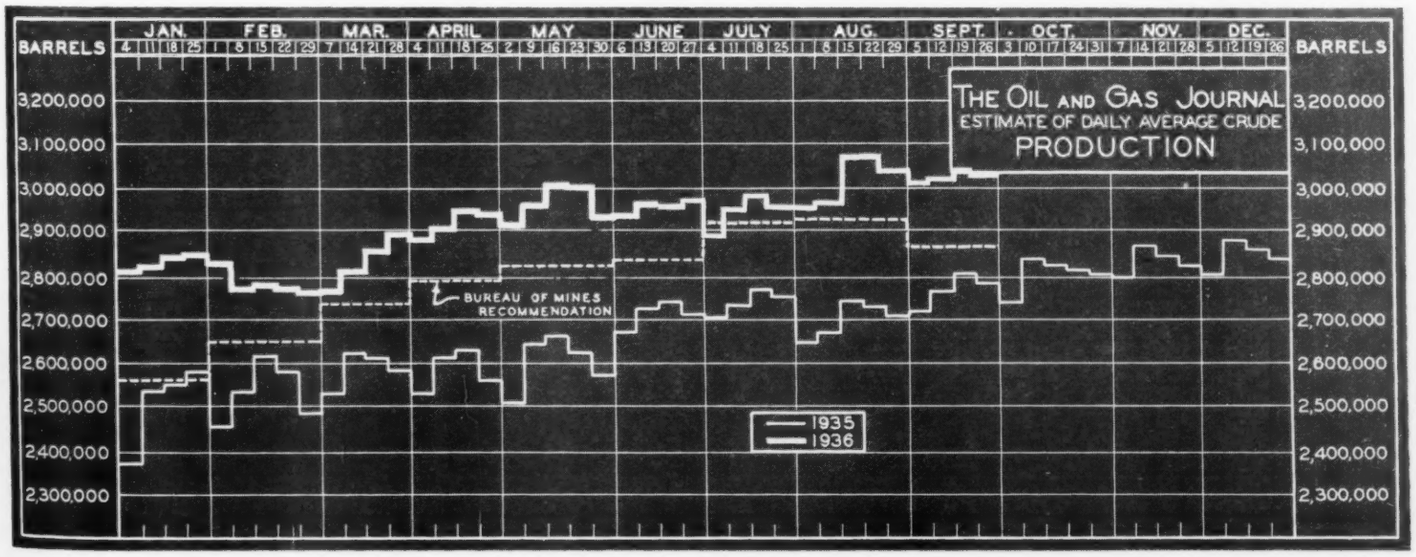
	Sept. 26 1936	Bur. Mines Sept. est.	Sept. state allowable	Sept. 19, 1936
Oklahoma City	143,500	.....	.....	147,375
Seminole-St. Louis	95,800	.....	.....	95,050
Remainder of State	341,275	.....	.....	348,025
Total Oklahoma	580,575	563,000	563,000	590,450
East Texas	441,884	.....	.....	439,187
West Texas	166,850	.....	.....	167,100
North Central Texas	87,446	.....	.....	87,489
Texas Panhandle	61,897	.....	.....	62,194
East Central Texas	64,089	.....	.....	60,798
Gulf Coast Texas	252,249	.....	.....	250,395
Southwest Texas	82,848	.....	.....	84,247
Total State of Texas	1,157,263	1,123,900	1,125,674	1,151,470
North Louisiana	80,845	.....	.....	81,435
Gulf Coast Louisiana	157,800	.....	.....	154,397
Total Louisiana	238,645	186,200	235,200	235,832
Santa Fe Springs	42,400	.....	.....	45,200
Long Beach	66,250	.....	.....	66,500
Kettleman Hills	77,900	.....	.....	76,250
Remainder of State	380,700	.....	.....	394,450
Total California	568,250	535,200	*544,000	582,400
Kansas	170,175	160,000	160,000	165,250
Arkansas	28,005	30,500	.....	28,065
Eastern Fields	113,100	107,100	.....	112,750
Michigan	29,800	31,300	.....	29,339
Southeastern New Mexico	75,900	70,500	78,355	75,900
Rocky Mountain area	62,610	56,300	.....	63,850
Total United States	3,024,323	2,864,000	.....	3,035,246

*Recommendation of Central Committee of California Oil Producers.

Crude Oil Stocks in United States

(BUREAU OF MINES ESTIMATE)

Week ending September 12, 1936	298,448,000
Week ending September 5, 1936	300,788,000
Week ending September 14, 1935	322,895,000



SPARKS FROM THE NEWS

Gigantic Gasser

A well in the Moore, Okla., field flows at the rate of 300,000,000 feet daily. This equals present natural gas consumption in Ohio and is 6 per cent of total United States demand.

Safety

Massachusetts proposes to place its prohibition of gasoline tax diversion in the only safe place—in the constitution.

Luck

The owner who held on to a stripper lease through the depression and now finds it suitable for water-flooding knows for the first time why he did it.

Wyoming Wisdom

Wyoming, using petroleum asphalt and little money, surfaced more roads last year than any other state except two.

Reverse

A few Mid-Continent refiners who at the start of September were looking for orders to take care of their gasoline ended the month in the opposite situation.

More Sales

The cooperative campaign to teach motorists importance of changing motor oils regularly is sounder from all angles than claiming unusual longevity for individual brands.

Offset

The cold wave which last week slowed up gasoline consumption in some areas also brought furnace oil tank-wagons out of storage.

Consolation

The hundreds of gasoline consuming cars parked around a political hall should hearten oil men regardless of what is going on inside.

Competition

The cetene number of diesel fuels may in time rank in importance with the octane number of motor fuels.

War Bill

The price of $1.26 per gallon including 85 cents tax and duty for gasoline in Rome is the motorist's contribution to a successful war.

Contrast

A Gulf Coast well flowing 139 barrels of oil daily at 9,963 feet is merely news now. Twenty years ago it would have been a miracle.

LATEST IN OIL FIELD ACCOMMODATIONS IN THE RODESSA FIELD, LOUISIANA

Texas Problem Is Analyzed by Col. Thompson

By NEIL WILLIAMS

Market demand figures of Bureau of Mines and other agencies have been greatly underestimated

AUSTIN, Tex., Sept. 28.—So long as there is a definite demand for the oil and the production of it does not create a waste, Texas oil producers will be permitted to supply that demand, Col. E. O. Thompson, chairman of the State Railroad Commission, declared in substance in an exclusive interview obtained by The Oil and Gas Journal, in which he freely discussed the present proration and production situation in Texas.

What this demand is, he said, will be determined within the state of Texas and not by any outside agency, and in the control of the production the commission will seek to look after the best interests of Texas producers and the state of Texas, which he pointed out has extensive oil interests of its own. However, in so doing, he explains, the commission will continue its full cooperation with other states and in the general picture there will be nothing to fear from Texas.

In the discussion, Colonel Thompson set at rest any doubt which oil operators might have as to the Railroad Commission's attitude on the proposed changes in well spacing regulations which would restrict drilling generally over the state to a wider minimum spacing than now in force. He has been convinced that the greater the number of wells drilled the greater will be the ultimate recovery, and as spacing regulations could be enforced only for prevention of physical waste and damage, or reduction of fire hazards, a broader spacing program on the grounds of limiting drilling would be out of order.

Discounting the growing anxiety of many in the industry that Texas has about reached the limit in the extent to which its production can be curtailed and that continued additions of new production as a result of the active drilling program under way will be reflected in increases in total output of the state that might disturb the equilibrium which has existed between production and demand, Colonel Thompson assured there is no cause for alarm. Although there is a physical, economical and legal limit below which production of a well cannot be cut, that limit has not been reached, he said, and if necessary to keep production within market requirements, further reductions in well allowables can be expected.

However, in the meantime, he pointed out, there is a definite demand for every barrel of oil Texas is producing with indications that the demand will be materially increased. He cited figures to (Table 2) show that the production of Texas has been running consistently from 2 to 3 per cent below the allowable as set by the commission, and that considering this there is room for further increase in production, especially in view of the fact that natural decline of production is taking many wells from the picture constantly. While there are several fields which are overproducing, he said, there are others which are unable to produce their respective allowables.

Colonel Thompson is definitely of the opinion that market demand figures of the Bureau of Mines and other agencies have been greatly underestimated. He termed the Bureau of Mines estimates as guesses based largely on trends of previous years. He pointed out that the actual demand for Texas oil as figured by the Railroad Commission and reflected in its allowable determinations totaled 244,226,249 bbls. during the first seven months of 1936 (Table 2 and accompanying chart) compared to the 235,257,200 bbls. estimated by the Bureau of Mines. He explained that the Railroad Commission determines what the actual demand is from a combination of many sources, including the monthly nominations by refiners and all purchasing companies, bona fide requests of other buyers, a study of production and storage figures of the preceding month, refinery sales and trends in consumption of petroleum products, and any other information that might be available. Estimates of the Bureau of Mines and other agencies are taken into consideration, and in the light of all this allowables are figured.

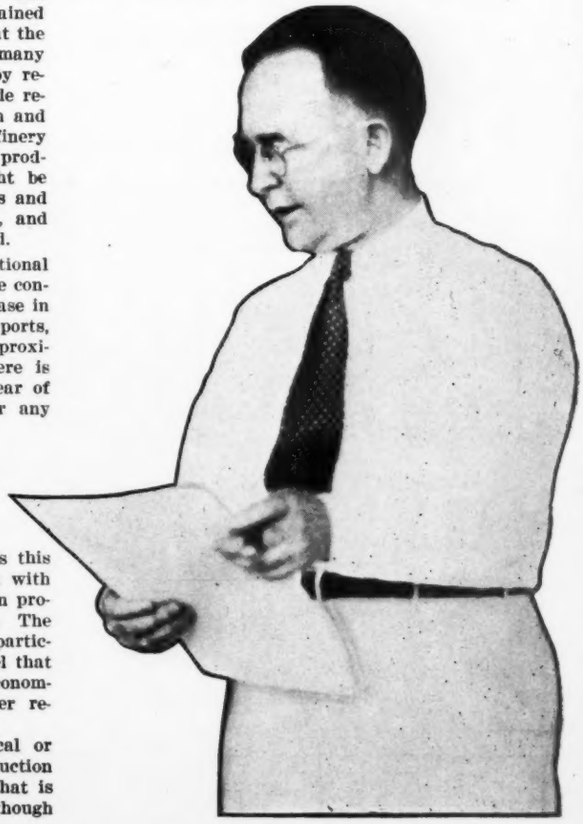
That there is a very definite need for additional production, he pointed out, is indicated by the continued drawing on storage. Despite the increase in production of the country and increased imports, stocks are being reduced at the rate of approximately 2,000,000 bbls. weekly. He said there is nothing in sight to give any occasion for fear of too much production either from Texas or any other state.

The unabated drilling of new wells and consequent bringing in of additional new production have resulted in a steady lowering of average allowables per well to keep the total output of the state within its market requirements. It is this picture which has caused operators to look with increasing concern over the present proration program and wonder what the outcome will be. The average production of wells generally, and particularly in the older fields, has reached a level that a question has arisen as whether physical, economical or legal limitations will permit further reductions.

What constitutes the physical, economical or legal limit of reduction in a well's production remains to be determined, and a problem that is faced in the present proration program. Although many operators who have seen their daily production and revenue dwindle to a comparatively small figure in successive lowering of well allowables feel that the limit already has been reached, the railroad commission is openly of the opinion that most fields and wells can stand further curtailment.

The extent to which production of Texas wells has been cut is shown in Table 1, which indicates the average daily allowable per well for September to be 17.53 bbls. The daily allowable for September, based on figures as of September 15, has been 1,147,101 bbls. with a total of 65,447 wells reported. The table does not take into consideration separately the number of pumping and marginal wells, which, included in the totals, reduces the average production figures. In the table there also are shown the daily allowables for January the total being 1,057,999 bbls. with 60,067 wells.

One of the principal complications in further curtailment of production of present wells is that of marginal well limitations. While in the marginal well law, marginal wells are referred to only as pumpers, which would not place any limit on the minimum of flowing wells, it is not likely that operators with flowing wells capable of high potentials would approve producing their wells at allowables below the minimum legally granted



A broader spacing program on the ground of limiting drilling would be out of order

marginal wells incapable of large production. This might result in court tests of what constitutes a "marginal" well, and might raise a serious question as to the validity of a proration order which would not give an advantage to a larger well over a small well.

The average well allowable in a number of fields already is nearing the marginal well limitations in those fields. The marginal limit in East Texas happens to be 20 bbls. daily. As shown in Table 1 the average well allowable is 20.4 bbls. However, this includes a large number of wells incapable of making 20 bbls., and the allowable of wells ranges from 20 to 32 bbls. daily, according to potentials. This range, in the opinion of the Railroad Commission, is sufficient to justify the low allowables, but whether further reductions, if any, will meet with favor of the operators is a question to be answered.

Due to the generally favorable price structure, which has permitted the majority of operators and the oil industry of Texas as a whole, to reap a substantial profit and due to the generally efficient control which has been maintained over the Texas production situation, reductions in well allowables so far have been accepted without general protest. Increases in consumption, accompanied by higher statewide allowables, have absorbed much of the new production brought in so far this year, which has minimized the reductions in well allowables.

What will happen when the curtailment of production reaches its physical, economical or legal limits and the new production brought in must be absorbed by other means than reducing the allowables of wells, is a matter of conjecture. Unless the amount of drilling and the volume of new production brought in are greatly reduced, or the new production is offset by natural decline of older fields, the only alternative, so far as can be seen, is increase in the total production of the state.

To the Railroad Commission, as well as a number of more optimistic students of the situation, there is no occasion for immediate alarm. According to statistics of the commission, production of the state has been running consistently from 2 to 3 per cent under the allowable. There are a few spots where production exceeds the allowable, but there also are districts and fields which are unable to produce the oil allocated to them. In the latter instances the excess allowables are distributed as required among other fields so the picture of the state as a whole constantly is being balanced.

In an accompanying chart, a comparison of daily average production with daily allowables and Bureau of Mines estimates of market requirements for Texas oil is pictured for the first 7 months of the year. During that period, according to railroad commission calculations, the allowable for all districts totalled 244,226,249 bbls.

TABLE 1—TEXAS DAILY AVERAGE ALLOWABLES BY DISTRICTS

	September, 1936			January, 1936		
	Daily aver. allowable	No. producing wells	Average per well	Daily aver. allowable	No. producing wells	Average per well
East Texas	435,223	21,307	20.4	435,500	19,588	22.23
Panhandle	60,690	2,955	20.3	59,509	2,659	22.38
North Texas	58,780	15,393	3.8	59,014	15,939	3.92
West Central Texas	55,848	6,922	8.07	35,268	6,530	5.40
East Central Texas	48,657	1,916	25.39	44,183	1,821	24.26
West Texas	147,730	4,725	31.26	144,344	4,104	35.17
Rodessa	9,360	37	252.9	577	1	577 00
Southwest Texas	160,397	7,815	20.52	120,932	6,388	18.93
Gulf Coast	170,416	4,377	38.93	158,672	3,937	40.30
Total	1,147,101	65,447	17.53	1,057,999	60,067	17.61

TABLE 2—COMPARISON OF BUREAU OF MINES ESTIMATES WITH THE COMMISSION'S MONTHLY ALLOWABLE AND INDICATED PRODUCTION

	Commission's monthly allowable	Monthly indicated production	Bureau of Mines estimated market demand monthly	Monthly comparison of production with B. of M. estimate.	
				Over	Under
January	32,798,005	32,142,906	31,527,000	615,906	.....
February	32,016,993	31,377,217	30,980,700	396,517	.....
March	35,522,985	34,725,565	34,224,000	501,565	.....
April	35,678,281	34,871,117	33,684,000	1,187,117	.....
May	36,810,054	35,947,317	35,107,500	839,817	.....
June	35,124,801	34,353,475	34,192,500	160,975	.....
July	36,284,130	35,352,640	35,541,500	.....	188,860
Total	244,226,249	238,770,237	235,257,200	3,701,897 3,513,037* 501,822† 16,520‡	188,860

*Barrels over Bureau of Mines estimates for first seven months of 1936.
†Barrels monthly average over Bureau of Mines estimates.
‡Barrels daily average over Bureau of Mines estimates.

TABLE 3—COMPARATIVE STATEMENT SHOWING DISPOSITION OF CRUDE OIL, STATE OF TEXAS, THE FIRST SEVEN MONTHS IN 1936

(Shown in barrels of 42 gallons)

	Indicated production	Imports from other states and foreign countries	Total	Runs to stills	Exports to other states and foreign countries	Total
January	32,142,906	7,560,904	39,703,810	24,471,199	17,740,791	42,211,990
February	31,377,217	6,909,327	38,286,544	22,423,804	17,101,316	39,525,120
March	34,725,565	8,127,410	42,852,975	23,832,411	18,447,797	42,280,208
April	34,871,117	8,839,863	43,710,980	23,606,770	17,766,747	41,373,517
May	35,947,317	9,130,174	45,077,491	24,968,683	17,214,325	42,183,008
June	34,353,475	7,886,105	42,239,580	23,953,459	18,407,352	42,360,812
July	35,352,640	8,458,518	43,811,158	25,597,005	18,392,717	43,989,722
Total	238,770,237	56,912,301	295,682,538	168,853,331	125,071,045	293,924,377

TABLE 4—STATEMENT SHOWING REFINERY STORAGE, LEASE STORAGE, GATHERING SYSTEM, TANK FARMS, TERMINALS, SHIPPING TANKS, OIL IN LINES, AND TOTAL STORAGE FOR STATE, 1936

Crude oil storage—Closing storage used as opening storage following month.

	Oil in lines	In lease tanks	Gather'g system storage	Refinery storage	Tank farms, terminals and shipping tanks	Total storage
January 1	9,106,660	3,816,609	8,227,083	10,080,704	76,761,982	107,993,038
February 1	9,058,587	3,920,935	7,461,297	9,503,720	75,223,434	105,167,973
March 1	8,983,492	3,698,327	8,457,818	9,454,187	74,648,205	105,242,029
April 1	9,173,176	3,771,832	8,768,011	10,968,884	74,042,634	106,724,537
May 1	9,047,955	3,920,553	9,400,760	11,974,111	75,133,304	109,476,683
June 1	9,018,704	3,979,184	9,329,694	11,861,561	75,864,586	110,053,729
July 1	9,055,754	4,037,520	9,245,913	12,116,010	75,117,495	109,572,692
August 1	9,089,136	4,024,092	9,935,825	11,914,189	74,467,000	109,430,242

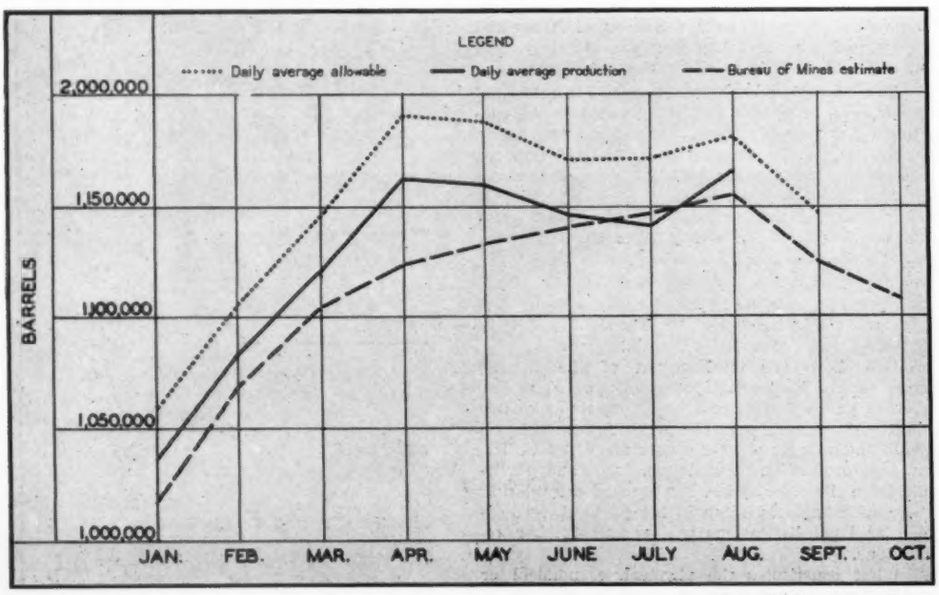
(Table 2). This was 5,456,012 bbls. greater than the indicated production during the same period which totalled 238,770,237 bbls. The commission's official reports for August and September are not completed, but there has been no indicated change. The August allowable totalled 36,580,190 bbls. compared with production of 35,152,690 bbls. reported by other sources. The September daily allowable, based on figures as of September 15, has been approximately 1,147,100 bbls., which would total 34,413,000 bbls. for the month.

Allowable figures determined by the Railroad Commission represent what the commission considers as the actual current demand. In view of this and the fact production has been running less than the allowable, it is assumed by the commission that the demand for Texas oil is greater than the production and a continuation of this situation leaves room for increases in production, or, if there is a slackening of demand, the allowable can be lowered and adjusted to some extent so that present producing conditions of individual wells need not be changed for the time being.

At the same time, the commission and many of the operators are anticipating substantial increases in demand and higher allocations in production. This is borne out in the present storage position. For some time the industry has been drawing on its storage at the rate of approximately 2,000,000 bbls. weekly so now it is calculated there is less than a 90 days' supply of oil on hand, or below the economic level of necessity. The withdrawal from storage has been in the face of increased production and increased imports of oil which has impressed upon the commission and the more optimistic students there will be a need for an additional production.

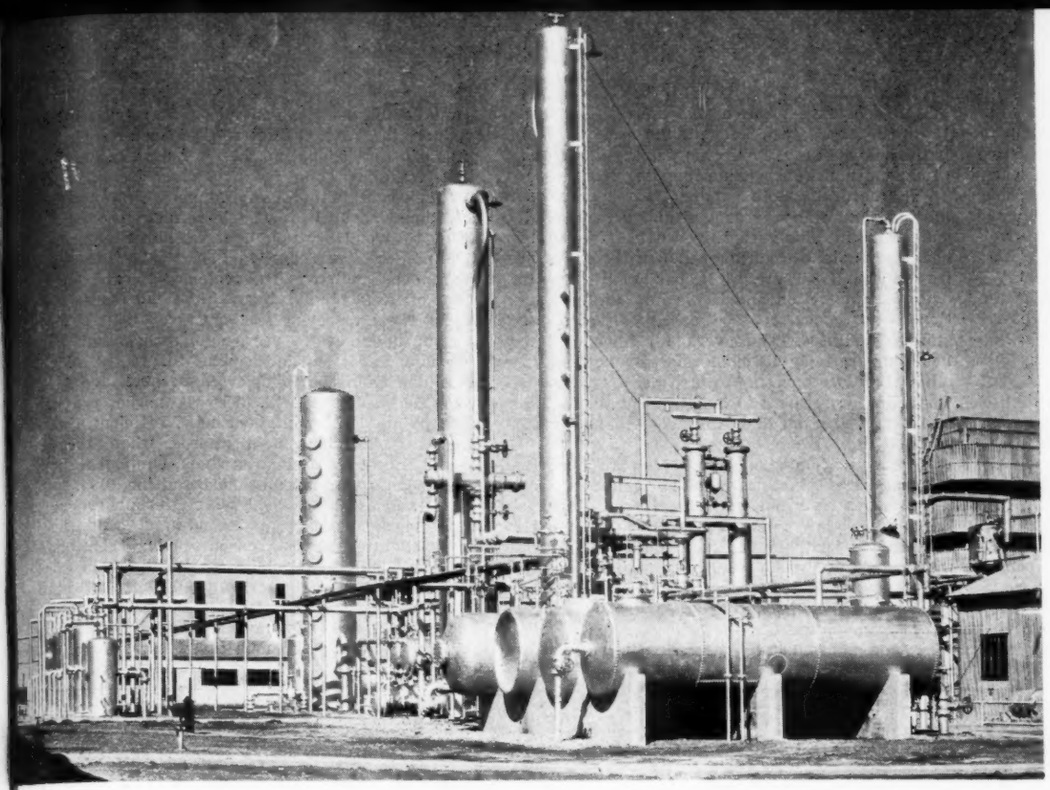
It will be noted in the production chart and also in Table 2 that the Texas allowables, as well as actual production, have been running above the Bureau of Mines estimates as recommended for Texas. For the first 7 months the Bureau of Mines estimated the market demand for the state at 235,257,200 bbls., compared with the total allowable of 244,226,249 bbls. and indicated production of 238,770,237 bbls. In August and September (not included in the table), the allowable has totalled 70,993,190 bbls. (preliminary figures)

(Continued on Page 18)



—Texas Railroad Commission.

Texas daily average crude allowable, production and Bureau of Mines estimate—1936



Modern natural gasoline plant recently constructed in the Mid-Continent

Revival in New Plant Construction Shown in Gasoline Industry

By D. H. STORMONT

The natural gasoline industry is experiencing outstanding expansion, both in production and in new plant construction. Total production, after declining for three years, in 1934 began to increase and during the first seven months of this year made an advancement of 7.2 per cent over production in the like period of 1935. New plants built during this year have also exceeded the number built in 1935, to date there having been some 30 large plants constructed or to be completed before the end of the year. Although the number of operating plants in the United States will probably continue to decrease as the uneconomical, small units are abandoned, the total capacity at the end of the year should show a considerable increase over that of 1935.

A study of the two accompanying tables reveals that there are two areas in which the majority of new plant construction is taking place, namely East Texas and Rodessa. These two fields also lead in the amount of plant reconditioning and in the amount of enlargement work.

East Texas in the past year has made a great advancement as a natural gasoline manufacturing area, at the present time being exceeded only by the Panhandle and Kettleman Hills in daily output. In July, 1936, this area produced a total of 13,012,000 gallons of natural, whereas in August, 1935, the monthly production was 7,557,000 gallons and in July, 1934, was only 4,900,000 gallons. Thus in two years production has increased approximately 275 per cent and the field has grown to be of major importance as a natural gasoline producing center.

The high percentages of propane and butane present in the gas produced in East Texas has undoubtedly influenced the amount of construction activity in this field. Several of the older plants were recently equipped to produce propane and butane fractions and the completion of Humble Oil & Refining Co.'s new 8-inch line from New London to the company's refinery at Bay City provides a ready outlet for this class of material. The natural gasoline, together with the butane and propane, produced in Humble's two plants and several other East Texas plants will be piped to Humble's refinery at Bay City. Here the butanes, and propane to a somewhat lesser extent, will be fractionated from the gasoline and charged to Humble's polymerization unit, now under construction.

New plant construction in the Rodessa field also contributed materially to the 791,000 gallons new capacity added during the year. To date there have been four new plants added and the two plants operating prior to this year are being substantially increased in gas handling capacity. Also two new plants have been planned in the north end of the field. Probably the most important construction program in this area is that of the United Gas Public Service Co. This company is now doubling the capacity of its plant and when completed it will have a daily capacity of 130,000,000 to 140,000,000 feet.

Many factors enter into the recent revival of plant building, the most important of these being the closing down of stripper plants in the Texas Panhandle, the trend toward more volatile fuels, a growing demand for propane and butanes as charging stock to polymerization units and an increase in consumption abroad. Then, too, there is the construction to replace obsolete equipment and to care for gas produced in new fields.

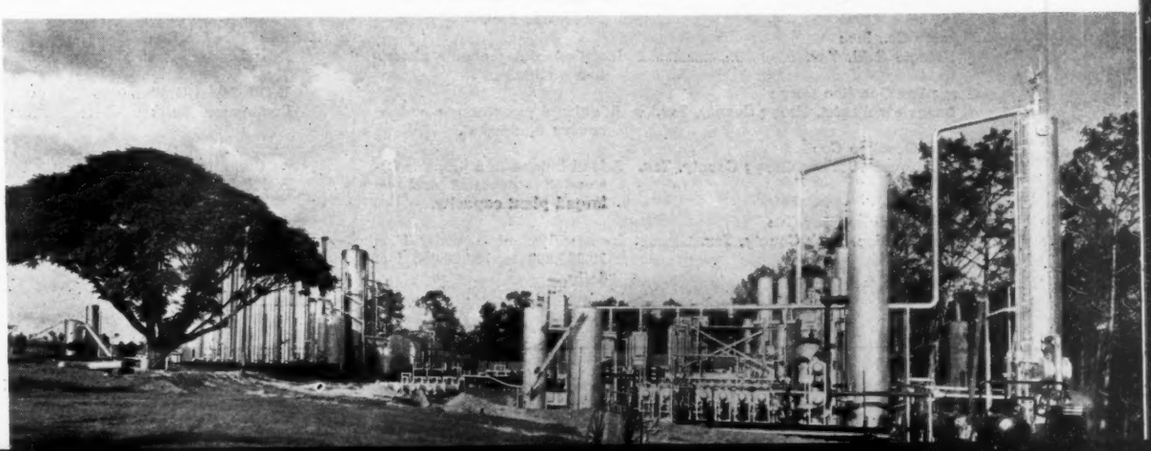
The closing down of stripper plants in the Texas Panhandle reduced the daily output of that area by about 350,000 gallons. Thus there was this amount of material that had to be supplied from other areas and offered an incentive for new plant construction.

In 1928 refinery technologists began to recognize the importance of highly volatile motor fuels and since that time there has been an almost steady increase in vapor pressures. Surveys conducted by The Oil and Gas Journal on the regular grade winter motor fuels of 12 marketing companies in the Middle West reveal that the 10 and 20 per cent points and the Reid vapor pressure during the past five years were as follows:

	1932	1933	1934	1935	1936
10 per cent, deg. F.	94	94	92	90	87
20 per cent, deg. F.	143	139	135	127	127
R.V.P., pounds	9.0	9.5	9.6	10.4	11.1

The tendency toward higher compression ratios in automobile engines has also been reflected to a large degree in the utilization of natural gasoline. Each year sees a greater number of old cars with low compression ratios taken off the road, which means consumption of natural gasoline is aided to the extent these old cars are replaced by new ones with higher compression. During the period when low compression was the rule it appeared quite probable that the use of natural gasoline would permit the manufacture of an ideal motor fuel without the necessity of deep cracking by refiners and thereby permit the use of large quantities of natural gasoline for blending motor fuels to fit the need of the low-compression engines.

Vapor recovery gasoline and other highly volatile products produced in refineries during the past few years have become a more important factor in supplying motor fuel volatility. According to Legatski, in a paper given before



the 1936 N.G.A.A. meeting (The Oil and Gas Journal, May 21, 1936), the vapor recovery products blended into motor fuels in 1935 were estimated to amount to about 113,064,000 bbls. Natural gasoline produced in this period totaled 38,858,000 bbls. Therefore, it may be seen that the refining industry supplied approximately three-fourths of the volatility for its motor fuels. This situation is almost the exact reverse of that prevailing in 1926.

This trend toward the refiner supplying the majority of his motor fuel volatility by light refinery products is causing many natural gasoline manufacturers to believe that natural gasoline prices over the course of a year should be kept more on a level. Thus the refiner, being assured of a substantial supply at a price in keeping with that which he is receiving for his finished motor fuel, would be less inclined to install vapor recovery equipment to supply his own volatility.

A study of quotations on the 26-70 grade, on which all other grades are based, reveals the wide fluctuation in price taking place each year. Using 1936, Group 3 quotations as an illustration shows that prices have varied from a low of 2.5 cents to the present high of 4.5 cents. In California, however, the situation is more stable due to the fact that the bulk of naturals produced is by integrated companies. These companies either blend the unstabilized gasoline with the crude and pipe it to their refineries, or transport the unstabilized product in natural gasoline lines to refineries.

The natural gasoline manufacturer must operate his plant the year around and process all the gas turned into his gathering system. Also he must operate his plant according to how the oil producer flows his wells. Therefore he has but little control over the production and if his immediate production is not consumed, he must provide adequate storage facilities. The average refiner of today has comparatively little storage for natural gasoline, therefore one step toward price stabilization would be for refiners to install adequate facilities and establish a steadier market demand by contract buying.

Polymerization should also play an important role and aid the natural gasoline manufacturer as the comparatively new method of producing gasolines assumes larger proportions. For economic reasons the majority of the poly plants installed in the near future will probably be at centers where large supplies of butane are available, or in other words at either large refineries or in localities where large quantities of natural gas are available. The plants installed at refineries will remove some of the volatile fractions now being used by refiners to give volatility to their motor fuels and thus offer additional markets for natural gasoline. Due to the low volatility of polymer gasolines, motor fuels containing these products will also require additional natural or volatile refinery products to bring the volatility up to present-day standards.

Another significant fact shown by the new plant construction is the tendency toward larger, more efficient plants. Instead of small plants scattering their gathering systems throughout a field, as was done several years ago, the general practice now is for one large plant to process all gas available from the field, or if an extensive field, some sector of the field. Also the majority of the new plants built contained new, efficient equipment although in some instances, where the expected life of the field was short, equipment from other plants was reconditioned and installed.

In the East Texas field, where the earlier plants were constructed from second-hand equipment, many operators have been increasing their plant capacities and modernizing their plants. It has been estimated that practically all of the salvaged equipment used in these plants and gathering systems will of necessity have to be replaced by new equipment during the next five years.

Natural Gasoline Plants Built in 1936 or Under Construction

Company and location—	Daily capacity— Cubic feet	Gallons
Arkansas Louisiana Gas Co.: Simsboro, La., in Ruston area	15,000,000	6,000
Coltexo Corp., The: Rodessa field, La., sec. 14-23-16	50,000,000	45,000
Continental Oil Co.: Tepetate field, La., Acadia Parish	50,000,000	50,000
Deep Oil Development Co.: Archer County, Tex., Chalk Hill pool	3,000,000	4,000
Del Ray Production Co.: Oklahoma City field, Britton, Okla., area	30,000,000	10,000
Eastern Texas Production Co.: Rodessa field, La.	10,000,000	9,000
Empire Oil & Refining Co.: Odessa, Tex., Cowden pool	35,000,000	50,000
General American Oil Corp.: Reed Switch, Rusk County, Tex.	10,000,000	30,000
Glenrose Gasoline Co.: Rodessa, La.	20,000,000	20,000
Grimes, O. H., Co.: Yost-Jasper Township, Midland County, Mich.	3,000,000	3,500
Gulf Oil Corp.: Ward County, Tex.	25,000,000	20,000
Landreth Gasoline Co.:* Ector County, Tex.	30,000,000	25,000
Magnolia Petroleum Co.:* T.&N.O. Survey, Moore County, Tex.	30,000,000	40,000
Magnolia Petroleum Co.: W. W. Walton lease, Winkler County, Tex.	20,000,000	16,000
Manhattan Gasoline Co.: Plymouth field, San Patricio County, Tex.	25,000,000	12,000
Marr Natural Gasoline Co.: Sparks Survey, southwest of Henderson, Tex.	1,500,000	2,000
Natural Gasoline Corp.: Dexter field, McPherson County, Kans.	12,000,000	25,000
Natural Gasoline Corp.: Monument, N. Mex.	20,000,000	18,000
Panhandle Eastern Pipe Line Co.: Near Liberal, Kans.	135,000,000	30,000
Pelican Oil & Gasoline Co.:† Rodessa field, La.	50,000,000	50,000
Phillips Petroleum Co.: Eunice field, N. Mex.	18,000,000	16,000
Phillips Petroleum Co.:‡ Edmond field, Okla.	50,000,000	80,000
Rodessa Gasoline Co.: Rodessa field, La., 2 miles west of Ida	40,000,000	30,000
Shell Oil Co. of California: Ten Section field, San Joaquin Valley, Calif.	30,000,000	40,000
Shell Petroleum Corp.: Lucien field, Noble County, Okla.	2,000,000	1,500
Sinclair Prairie Oil & Gas Co.: East Texas field, H. B. Wilson lease	12,000,000	20,000
Skelly Oil Co.: South Burbank field, Okla.	10,000,000	25,000
Smith Bros. Natural Gasoline Co.: Winkler County, Tex.	50,000,000	40,000
Standard Gasoline Co.: Ward County, Tex., Durgin lease	20,000,000	12,000

*Construction planned in immediate future.

†Acquired by Tide Water Oil Co.

‡Jointly owned by Continental Oil Co.

Twelve Major Natural Gasoline Construction Projects in 1936

Company and plant location—	Nature of work
Arkansas Fuel Oil Co.: Rodessa field, La.	Increasing capacity from 40,000 to 60,000 gallons daily.
Carter Oil Co.: Fitts field, Okla.	Increased daily gas capacity 20,000,000 feet.
Clymore Co., Inc.: Refugio field, Tex.	Installed high-pressure absorption equipment.
Gregg Tex Gasoline Corp.: Longview district, Gregg County, Tex.	Additional compressors and recovery equipment.
Hanlon Gasoline Co.: D. Ferguson Survey, Gregg County, Tex.	Added butane and propane absorption equipment and enlarged plant capacity.
Humble Oil & Refining Co.: New London, Rusk County, Tex.	Increased plant capacity from 10,000,000 to 15,000,000 feet daily.
Lisbon Gasoline Co.: E. E. Moore lease, Rusk County, Tex.	Modernized and increased plant capacity.
Lisbon Gasoline Co.: W. T. Grisson lease, Rusk County, Tex.	Added fractionating equipment and increased capacity.
Parade Gasoline Co.: New London, Rusk County, Tex.	Reconditioned and plant capacity increased.
Shell Oil Co. of California: Dominguez, Calif.	Remodeled plant, increasing plant capacity from 20,000,000 to 40,000,000 feet.
Texas Co., The: Paducah plant, Foard County, Tex.	Increased capacity and converted plant from compression type to absorption type.
United Gas Public Service Co.: Rodessa field, Caddo Parish, La.	Increasing daily plant capacity by 50,000 gallons.

Many Forgetting to Provide for Social Security Payroll Tax

By T. F. SMILEY

THOUGH THE LARGER ORGANIZATIONS IN THE OIL INDUSTRY HAVE BEEN BUILDING UP RESERVE FUNDS FROM MONTH TO MONTH TO MEET THE PAYROLL TAX OF 1 PER CENT WHICH MUST BE PAID ON OR BEFORE JANUARY 31, 1937, UNDER THE SOCIAL SECURITY ACT, MANY OTHERS SEEM TO HAVE MADE NO PROVISION FOR IT. SO, AS THE ACCOMPANYING ARTICLE POINTS OUT, A FRANTIC LAST-MINUTE SCRAMBLE TO EFFECT THE NECESSARY FINANCIAL ARRANGEMENTS APPEARS PROBABLE. ¶WHO IS AN EMPLOYE? WHAT CONSTITUTES WAGES? WHAT IS TO BE DONE ABOUT EXPENSE ACCOUNTS? DO AN EMPLOYER'S CONTRIBUTIONS TO A WORKMEN'S PENSION FUND EVER BECOME SALARIES AND THUS TAXABLE? THESE AND OTHER QUESTIONS, SOME OF WHICH LOOK SIMPLE AT FIRST, ARE SUBJECTS OF MORE OR LESS WORRIED DISCUSSION.

A little casting about discloses that an astonishing number of employers in the oil industry are apparently oblivious of the fact that on or before January 31, 1937, they will have to pay to the federal government a tax of 1 per cent on their 1936 payrolls in compliance with the Social Security Act approved August 14, 1935. While many companies have made businesslike provisions for this draft on their finances by laying aside cash from month to month, others have neglected to do it, and a dismayed scramble is likely to be witnessed as these delinquents waken to their omission.

Every employer who has 8 or more individuals in his employ for at least some portion of the day, on each of 20 days in the year is required to pay 1 per cent tax on the total wages or salaries disbursed by him in 1936, 2 per cent on those in 1937 and 3 per cent on those in each year thereafter. Beginning with 1937 there are additional taxes to be taken care of under the act, so that by 1949 employers will be paying 3 per cent on all wages and salaries and another 3 per cent on all wages and salaries up to and including $3,000 a year. Employes will begin paying a tax next year also. For 1937 it will be 1 per cent on wages and salaries up to and including $3,000, and it will increase one-half of 1 per cent every three years until in 1949 it will reach 3 per cent, where it will stay. But the 1 per cent tax on 1936 payrolls presents an obligation of immediate and lively importance.

All the larger employing organizations in the oil industry are understood to have been building reserve funds from month to month for meeting the payroll tax next January, but they too have their problems for as was to be expected in the initial operation of a law of such scope, certain provisions will have to be clarified before untroubled administration of the measure can be attained.

EMPLOYE OR CONTRACTOR?

For instance, in order that the producer, refiner, rig builder, drilling contractor or other employer may set aside cash which he will need to pay as a tax on wages and salaries he must know whom to list as employes. So who is an employe? At first it sounds like a rather childish question, but legal minds of major oil companies have found it far from simple.

Here is a producer preparing to drill a test on land cluttered with rocks and stumps. A nearby farmer agrees to remove them and to dig a slushpit for $200. He brings a team of horses, plow and other necessary equipment, does the job under the supervision of the producer and receives his money. Is he an employe or an independent contractor? If it be decided that he is an employe, then what part of the $200 is wages and what part is pay for use of the plow, horses, mower and other tools used?

A refiner who makes a similar sort of agreement with somebody to throw up fire-walls around his tanks may face the same perplexing question.

Again, suppose a drilling contractor goes to 4,000 feet under the terms of a written agreement and has a dry hole. The producer decides he would like to have the hole drilled another thousand feet, hoping perhaps that he may still strike pay and desiring anyway to obtain cores at the lower depths. A verbal agreement is made. The driller, under the constant direction of the producer, deepens the hole as desired. Does the money he receives, an amount agreed upon in advance, represent wages or was he working under contract? Was he an employe on that last 1,000 feet?

That doubt should arise does not seem strange after reading the following definition of the relationship of employer and employe as it appears in regulations governing the Social Security Act published by the Bureau of Internal Revenue:

NOT ONLY WHAT BUT HOW

"Generally the relationship exists when the person for whom services are performed has the right to control and direct the individual who performs the services, not only as to the result to be accomplished by the work but also as to the details and means by which that result is accomplished. That is, an employe is subject to the will and control of the employer not only as to what shall be done but how it shall be done. In this connection it is not necessary that the employer actually direct or control the manner in which the services are performed; it is sufficient if he has a right to do so. The right to discharge is also an important factor indicating that the person possessing that right is an employer. . . . In general if an individual is subject to the control or direction of another merely as to the result to be accomplished by the work and not as to the means and methods for accomplishing the result, he is an independent contractor, not an employe."

Further perplexity is encountered in endeavoring in some cases to determine just what constitutes wages. Oil companies which provide company-owned houses for employes, supplied with gas, electric-light and water service, face this enigma. Discussing wages the regulations say:

"The medium in which the remuneration is payable is . . . immaterial. It may be payable in cash or in something other than cash, such as goods, lodging, food and clothing."

Are the company house, the gas, the electric light and the water to be considered then as wages? And if so, what amount do they represent in terms of dollars? Some companies contend that they provide these dwellings for their own convenience and advantage, not for the employes'. They themselves benefit greatly, they point out, by having their workman right on the ground. Some companies who thus have provided free residences for their men are reported to have met the tax puzzle involved by charging the men a certain amount as rent and then adding the same amount to wages. This solution of course entails payment of tax on the additional wages thus set up.

IF NOT REMUNERATION, WHAT IS IT?

If the comfortable dwelling, with its light, heat and water, is not remuneration, what is it? The question is asked by oil companies wrestling with intricacies of the social security tax. Suppose two producing companies in the same field offer the same rate of pay to their workmen. One, however, provides free homes. The other does not. It is safe to say that until the company which provides free homes has hired all the men it needs the other company will not be able to get one workman.

An enigma is presented by pension plans established by oil companies acting jointly with their employes. Suppose employes authorize the company to deduct say 10 per cent of their wages and put it into a pension fund, the company contributing a similar amount, but the benefit of the company's contributions not becoming available to the employe till he has been with the company five years. The employe may not remain with the company that length of time. In the meantime must the company's contribution to the pension fund be regarded as wages and must tax be paid on it?

The expense account may become an elusive riddle. Some companies allow a flat amount for

(Continued on Page 18)

Pipe Line Activity

Shell Construction Contract

SAN FRANCISCO, Calif., Sept. 28.—Shell Oil Co., West Coast operating subsidiary of Shell Union Oil Corp., has let a contract for the erection of four new pumping stations and alterations and additions to six existing stations. The amount is believed to approximate $500,000. The stations will be a part of Shell's enlarged pipe line facilities from the San Joaquin Valley oil fields to the company's Martinez refinery on San Francisco Bay. The new pumping stations will be located at Bakersfield, Wasco, Mid and Kettleman. Work is to start immediately.

Sulphur-Talco Line

DALLAS, Tex., Sept. 28.—Operators in the Sulphur Bluff pool, Hopkins County, have closed a deal with Clint Murchison who is to lay a pipe line from the pool east of the Talco pool, thence south to the East Texas field to connect with the American Liberty company pipe line which extends to Houston thereby giving the Sulphur Bluff pool its first pipe line outlet and the Talco field its first independently owned outlet to the Gulf. There is a report also to the effect that Murchison will lay a line from the Rodessa field in Louisiana west to the East Texas field to connect with the American Liberty line to the Gulf.

New Arizona Gas Line

Work is getting under way on a new line which is to supply natural gas for industrial and municipal purposes at Ajo, Ariz. Phelps Dodge Corp. mines at Ajo will be the principal consumer. The line will be constructed and owned by El Paso Natural Gas Co. and will be solidly oxyacetylene welded by the Lindeweld method.

The new line, with outside diameter of 8⅝ inches, will extend from the main line of El Paso Natural Gas Co. near Casa Grande, Ariz., to Ajo, a distance of 83 miles. The line will operate at 400 pounds pressure. Construction started September 8.

Gas Line to Rochester

NEW YORK, Sept. 28.—Authority to lay a $1,500,000 pipe line to bring natural gas to Rochester has been granted by the State Public Service Commission.

The commission overrode the dissenting opinion of Commissioner Maurice C. Burritt, who conducted hearings at which public utility, railroad and coal companies opposed the project of the Cabot Gas Corp. which intends to tap new reservoirs in southern New York and northern Pennsylvania.

The decision, announced by Percival D. Oviatt, counsel for the Cabot Gas Corp., is subject to certain limitations to be defined at a meeting of interested parties at Buffalo. The gas will be used principally as fuel by the Eastman Kodak Co., which has signed a three-year contract to take a maximum of 5,500,000,000 feet annually. The natural gas supply will supplant the artificial product, for which about 225,000 tons of coal is burned in the city every year.

Commissioner Burritt based his opposition on a desire to conserve natural resources. It was argued the field, which now supplies thousands of domestic consumers, would be exhausted in from three to five years merely to supply a low-grade industrial fuel.

Plans call for construction of a 14-inch line through Allegany, Wyoming, Livingston and Monroe Counties.

British Columbia Project

CHATHAM, Ontario, Sept. 26.—The Canada Empire Crude Oil Syndicate is planning to pipe natural gas to the Pacific Coast. Operations are being financed by British Columbia and eastern Canada capital.

International Acetylene Association

The 37th annual convention of the International Acetylene Association will be held at the Hotel Jefferson in St. Louis, Mo., November 18-20.

The opening day will be devoted to a general industries session, including papers on Metallurgical Joints in Repetitive Production, Designs for Welding Which Will Defer Obsolescence and Increase Profits for Manufacturers and Users of Metal Products, Equipping for Welding and Cutting, and Heavy Construction. An oxy-acetylene welding and cutting forum, with live demonstrations, will mark the evening session.

On the second day the heavy industries session will include papers on Hard-Facing, Welding in Mining Operations and on Railroads, and Welding of Copper Alloys. A welding and cutting round table will be held as an evening session, led by chairmen and technical advisors.

The annual luncheon and business meeting and piping industries session on the closing day will include papers on Refining Equipment, Welding of Pipe Lines for Oil and Gas, Power Plant Piping and Recent Developments in Pressure Vessel Construction.

New Company in Japan

A dispatch from Tokyo states that following a cabinet meeting, Gotaro Ogawa, minister of trade and industry of Japan, announced that a new petroleum company will be established shortly through an agreement with Standard-Vacuum Oil Co., Rising Sun Petroleum Co., Royal Dutch Shell and Mitsui Bussan Kaisha. The new company is to store petroleum in Japan in accordance with a ministerial decree and the minister said Standard-Vacuum and Rising Sun agreed to offer sites while Mitsui Bussan Kaisha would advance 25,000,000 yen (about $12,500,000).

This apparently is an outcome of composing differences between oil companies and the Japanese government, following the decree some months ago that a much increased amount of petroleum be stored in Japan. Rising Sun, capitalized at 20,000,000 yen, is the Japanese distributor for Shell products. The other Japanese company mentioned is distributor for products of General Petroleum Corp. of California.

Refinery Expansion

Plan New Corpus Christi Refinery

CORPUS CHRISTI, Tex., Sept. 26.—Announcement has been made for the construction of a 6,000-bbl. refinery at Corpus Christi by the Petrol Coastal Refining Co. The plant, to be built by Peter P. Prunty and associates of New York, will be west of here near the Southern Alkali Corp.'s chemical plant and will involve a total expenditure of $1,000,000 for the plant and water terminal. Principal products will be gasoline and furnace oils. Construction is expected to be started soon after October 1 according to engineers who are completing plans for the plant. The storage capacity of the terminal will be about 500,000 bbls. Crude will be furnished from the adjacent fields of the area.

Slings used to spread coating applied by hand

Constructing New Lube Oil Plant

EL DORADO, Ark., Sept. 26.—Lion Oil Refining Co. now has 100 men engaged in constructing the new lubricating oil plant at its refinery here. The plant will use Smackover crude distillate to manufacture all grades of lubricating oils and will have a capacity of approximately 500 bbls. daily. Construction is scheduled to be completed by about January 1, 1937.

Plan Refinery for Talco Pool

FORT WORTH, Tex., Sept. 26.—Construction of a new refinery at Mount Pleasant in the Talco field of Titus and Franklin Counties, Texas, was in prospect this week, according to officials of the Talco Pipe Line Co. Officials of this company, which is the principal crude purchaser in that field, stated that they had been approached by individuals interested in building a plant to handle the Talco output, now having some difficulty in finding a satisfactory market. Also it is reported that the pipe line company itself planned construction of such a plant. Plans call for an outlay of about $300,000. Capacity of the refinery will be about 3,500 bbls. daily, and will include a modern type cracking plant due to the low gravity of the Talco crude. Tests conducted on the crude show that cracking produces an excellent grade gasoline with good recovery despite its low gravity.

Natural Gas News

Michigan Gas Reserves

The total proved and semiproved initial recoverable gas reserve from the central Michigan area, based upon a correction factor of 90 per cent and an abandonment pressure of 125 pounds per square inch absolute at the well head, was estimated to be approximately 48,200,000,000 feet of gas. About 6,000,000,000 feet had been withdrawn from the gas fields prior to February, 1936. The proved and semiproved net recoverable reserve was, therefore, approximately 42,200,000,000 feet.

These conclusions are contained in a report submitted to the Geological Survey Division, Department of Conservation, state of Michigan, at the request of that department and the Michigan Public Utilities Commission. The area studied by E. L. Rawlins and M. A. Schellhardt, engineers of the Bureau of Mines, comprises the Care, Vernon, Broomfield, Austin, and Hinton-Millbrook-Belvidere gas fields; the Vernon and Ferris-Crystal oil and gas fields; and gas producing areas in Home, Richland, Day and northern Ferris Townships.

As wells are drilled to deeper horizons in the search for oil more knowledge will be obtained of the gas reserves in formations above the oil-bearing horizons. The Michigan stray sandstone members are irregular, not only within the areal extent of general occurrence in central Michigan but also with productive areas of individual fields. The pay horizon in the Michigan stray sandstone is comparatively thin, the productive areas of individual gas fields are relatively small, and the gas reserves per acre in the productive area are comparatively low.

Oil and natural-gas fields in central Michigan occur consistently in northwest-southeast trends. Based upon available production and subsurface data, it is thought that additional gas reserves from the Michigan formation in central Michigan will be obtained by (1) the extension of present proved gas fields; (2) development of new gas fields, and (3) gas production from sandstone members higher stratigraphically in the Michigan formations than the basal member of that formation. Wells that produce from stratigraphically high sandstone members in the Michigan formation have been drilled on the "flanks" of gas-field structures in central Michigan fields. Only rough estimates can be made of the gas reserves in such members but it seems probable that these reserves will be found in comparatively small "pools," and their commercial importance will depend considerably upon the availability of gas from the wells, the sizes of the pools, and their proximity to the fields producing from the lower Michigan stray sandstone members.

It has been estimated that future development of the proved gas fields might result in an additional gas reserve of approximately 12,000,000,000 feet, and development of new gas fields, based upon present known structural conditions, in an additional recoverable gas reserve of approximately 21,000,000,000 feet. These estimates are based on an abandonment pressure of 125 pounds per square inch at the well head.

Studies of back-pressure data that have been obtained from gas wells in central Michigan suggest that with continuation of present indicated decline of delivery capacities of the wells, commercial production of gas will not be feasible at abandonment pressures for the field less than 125 pounds per square inch absolute, and in some fields commercial gas production possibly will not be feasible at abandonment pressures less than 200 pounds per square inch absolute. The production of natural gas from the Michigan stray sandstone depends upon economic factors common to the natural gas industry. This is particularly true because of the comparatively low gas reserve per acre in most of the present proved fields and the comparatively small areal extent of the fields. The magnitude of the natural gas reserve and the availability of this reserve, or the rate at which gas can be produced from the reserve without damaging the wells or the productive formation, should be correlated when considering the feasibility of pipe line projects for market requirements.

For the purpose of the report, reserves of gas in oil-bearing formations were considered mainly from the standpoint of the effect of the availability of the gas on the requirements for gas from the Michigan stray sandstone. Large quantities of the gas already have been produced from the oil-bearing formations, part of which contained sulfur. Oil production practices are not favorable to the use of the gas for domestic and most industrial requirements.

New Transmission Line

WALLACEBURG, Ontario, Sept. 26.—Union Gas Co. is laying a new 6-inch transmission line from the Sarnia transmission line to the local distributing system. About 9,000 feet of pipe will be laid, which is being treated with durenite as a protection against corrosion.

Sweet Gas Exception

AUSTIN, Tex., Sept. 28.—An order authorizing use of sweet gas in a carbon black plant, the first order of its kind since enactment of the gas waste law, has been issued by the Railroad Commission.

The order applies to the Polo Oil Co.'s No. 1 Sanford gas well in Hutchinson County. The order stated gas from the well, although technically classified as sweet, contains too great an amount of sulfur for it to be used for lighting and heating purposes, the uses to which sweet gas is limited by the law.

Burrton Field Hearing

A hearing to receive evidence concerning gas wastage and other production problems in the Burrton field of Reno County, Kansas, has been scheduled for 10 a.m. October 9 at the Broadview Hotel in Wichita by the Kansas Corporation Commission.

According to T. A. Morgan, director of the conservation division, the commission is desirous that each producer in the Burrton field be represented at this hearing, with sufficient information and suggestions regarding the engineering, production and development problems of the various properties and the field in general to enable the commission to determine the proper oil-gas ratio, as required under house bill No. 279.

ATHENS, Tex., Sept. 28.—The Athens Natural Gas Co., headed by Wofford Cain of Dallas, has completed its 4-inch pipe line from the northern sector of the Cayuga oil field to Athens.

Natural Gasoline

Work Begun on Louisiana Plant

SHREVEPORT, La., Sept. 26.—Arkansas-Louisiana Gas Co. has begun construction work on a new gasoline absorption plant in the Sligo field of Bossier Parish, Louisiana. The plant will have a daily capacity of 15,000,000 feet, with daily yield of 60,000 gallons.

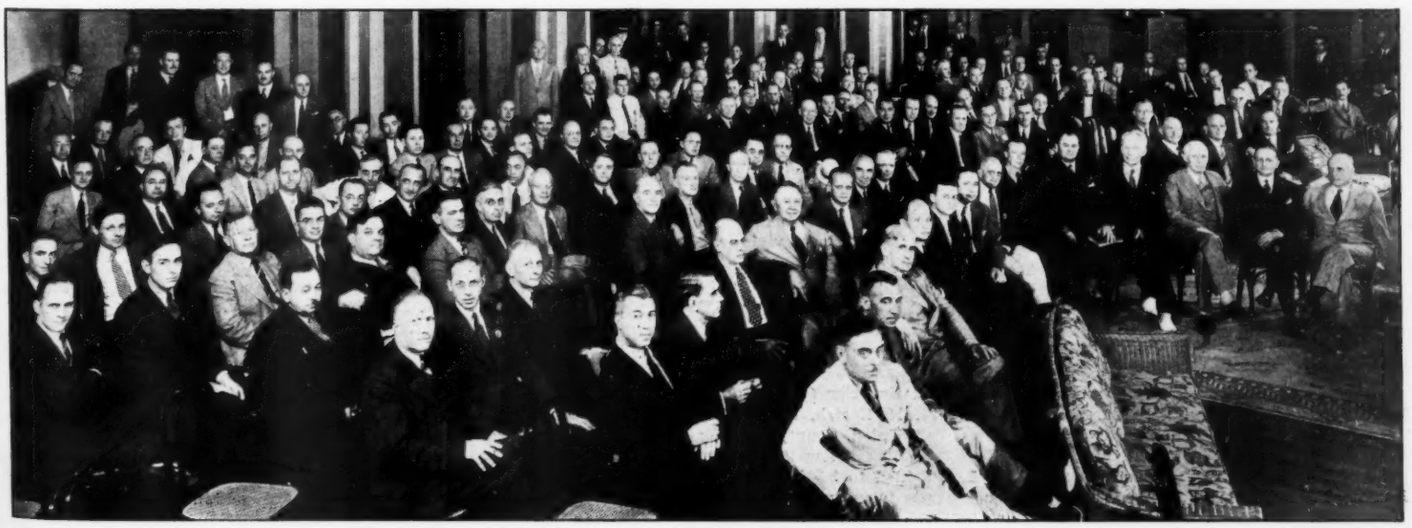
New Terminal and Blending Plant

Hanlon-Buchanan, Inc., has begun construction of a gasoline blending plant and deep-water terminal at Corpus Christi, Tex., for the blending of natural gasoline with crude oil. The blending plant will be located north of Corpus Christi Refining Co.'s property. Cost of the project will be about $100,000. Contract for the steel construction has been awarded the Wyatt Metal & Boiler Works, Houston, Tex.

More Texas Oil Taxes

AUSTIN, Tex., Sept. 28.—Governor Allred in his message to the legislature recommended: A substantial increase in the tax on natural resources, including oil, and sulfur; increased franchise taxes on oil and gas pipe line companies.

ANNUAL MEETING OF NATIONAL PETROLEUM ASSOCIATION, ATLANTIC CITY, N. J.



PENNSYLVANIA GRADE MEETING ON BOARD LAKE ERIE STEAMER

The Pennsylvania Grade Crude Oil Association's 1937 annual meeting will be held on board a Lake Erie steamer, Seeandbee, cruising the lake region for two days, with all sessions being held on board the boat. Dates for the meeting are June 17-19.

HARRY M. RUGG

The entire facilities of the steamer will be placed at the disposal of the association's membership. Accommodations are ample to care for a large attendance and provide entertainment features which have not been feasible for previous meetings of the association. According to present tentative plans the ship will leave some convenient lake city, probably Erie, Buffalo or Cleveland, at noon Thursday, June 17. The first general session will be held that afternoon with others to follow on the second day. The boat will return to the city of departure at noon Saturday.

Harry M. Rugg, an automotive engineer, has been appointed to the staff of the Pennsylvania association. He will make his headquarters in Detroit where he will keep in touch with developments in the manufacturing industry and with prospective changes in automotive design.

Rugg has had extensive experience in the automotive and lubrication field and has also spent some time in instructional and employe training work. Following the war he was employed in a research capacity by the Dodge Brothers Co. During this connection he spent some months at the Bureau of Standards in Washington, where he assisted in setting up the original program for the Cooperative Fuel Research. He then entered the employ of the Texas Co., also in a research capacity. More recently he was assistant to the chief of the engineering division of the automotive department of the Vacuum Oil Co.

Samuel A. Hartwell, Jr., who has been abroad for the past year and a half as European manager of the association, will return to the Oil City headquarters offices about October 1. Hartwell, who comes back to the association offices as assistant secretary, has been relieved by S. F. Pratt, who is now in Europe in charge of foreign operations.

S.A.E. DALLAS PROGRAM

A regional meeting of the Society of Automotive Engineers will be held at Dallas, Tex., October 8-9. F. M. Young will be chairman at the opening morning session when papers will be delivered on Variable Transportation Problems of the World, by A. W. S. Herrington, Marmon-Herrington Co., and on Auxiliary Automotive Equipmeent Used in Oil Field Work, by C. P. Parsons, vice president, Halliburton Oil Well Cementing Co. At the evening session an address on Oil Bath Automotive Type Cleaners will be delivered by R. F. Norris, Burgess Laboratories.

Friday morning T. B. Rendel will be chairman of the [illegible] cants session at which papers will be read on Economic Place of Automotive Oil Engines, by A. F. Campbell, Waukesha Motor Co., and on Care and Servicing of Engine Cooling Systems, by F. M. Young, Young Radiator Co.

MID-CONTINENT OIL AND GAS ASSOCIATION MEETINGS

The Mid-Continent Oil and Gas Association announced that the annual meeting of the directors will be held in Tulsa December 15, following the annual meeting of the three divisions.

The Louisiana-Arkansas division, headed by D. W. Harris, will meet at Shreveport November 10, the Kansas-Oklahoma division will meet in Tulsa November 20, and the Texas division will meet December 4 at Houston.

Robert F. Kerr, Oklahoma City, is president of the Kansas-Oklahoma division, and Jake L. Hamon, Dallas, is head of the Texas division.

THE MARKETS*

CRUDE OIL: *No changes in posted schedules of major buyers. There have been complaints from Michigan producers regarding recent reductions of 10 cents per barrel and one independent refiner has advanced price 5 cents. Two large sales at Gulf for foreign movement were slightly lower than posted schedules plus transportation and loading charges.*

REFINERY: *With reductions in crude runs to stills at small Mid-Continent refineries and increased buying, gasoline prices are firmer. East Texas market particularly satisfactory. Standard of Louisiana reduces gasoline tankcar prices one-half cent in its marketing territory. Improved demand for fuels and burning oils throughout entire country has not been reflected in important price changes in these products.*

TANK-WAGON AND SERVICE STATION: *Standard of Indiana and Standard of Nebraska reduce gasoline posted dealer and tank-wagon prices .3 cent. Dealers reduce service-station prices same amount. Standard of Louisiana reduces tank-wagon and service-station prices one-half cent. Scattered reductions in other areas. Tank-wagon prices on furnace oils reduced at several points in East.*

FINANCIAL: *Advance in majority of common stocks under way since late August continues. Average prices of 30 representative stocks for week ending September 26—High, 35.01; low, 33.51; close, 34.22. Week ending September 19—High, 34.31; low, 33.09; close, 33.89.*

**Detailed information in Market Section.*

OIL MEN OF MANY STATES PLANNING FOR EXPOSITION

Leading men in the oil and allied industries appear on the advisory board which is being organized for the International Consumers' Petroleum Exposition, to be held December 5-13, 1936, in Convention Hall, Detroit, Mich. With Wirt Franklin, president of the Wirt Franklin Petroleum Corp., Ardmore, Okla., as national chairman, state chairmen are being selected in all states. Those who have accepted positions follow:

C. E. Arnott, New York; Robert W. Atha, Michigan; T. H. Barton, Arkansas; William H. Bell, Illinois; C. M. Boggs, Kansas; R. A. Broomfield, California; Waller Chenault, Kentucky; J. D. Collett, Texas; William J. Dinneen, Wyoming; Hiram M. Dow, New Mexico; R. W. Dunn, Mississippi; C. E. Foreman, Indiana; Joseph Moorhead, Pennsylvania; Frank Phillips, E. H. Moore and William B. Way, Oklahoma. Automotive division—Charles T. Newton, Ford Motor Co., chairman; C. H. Bliss, Nash Motors Co.; C. L. McCuen, Olds Motor Works. Aviation division—Thomas E. Braniff, chairman. Universities division—C. I. Pontius, president, University of Tulsa, chairman.

Mr. Atha, of Stewart-Atha, Inc., oil producer of Mount Pleasant, Mich., and state chairman for Michigan on the advisory board, is organizing a committee of 200 oil men to act as the Michigan host committee for the exposition.

NO FEDERAL JURISDICTION IN ARIZONA GASOLINE CASE

PHOENIX, Ariz., Sept. 26.—In dismissing a suit of the Standard Oil Co. of California for a permanent injunction restraining the Mohave County attorney and the State Attorney General from "commencing or prosecuting" charges of state antitrust law violations on gasoline prices, a three-judge federal court here held it was "without jurisdiction to grant the relief asked."

NORTHEASTERN NEW MEXICO TEST

Superior Oil Co. and Olson Drilling Co. No. 1 J. H. Zurich, SE SE SW section 2-21-34, wildcat in Union County, northeastern New Mexico, was drilling below 2,510 feet. It was expected to be drilled to 3,500 feet, unless granite or commercial pay is encountered above.

J. E. POGUE, VICE PRESIDENT OF CHASE NATIONAL BANK

Joseph E. Pogue, of New York City, has been appointed a vice president of the Chase National Bank. Mr. Pogue has been closely identified with the petroleum industry for many years as a consulting engineer and is widely known as an authority on basic trends in that industry. He is the author of numerous articles and of several books dealing with the nation's oil resources and their conservation. In addition to his business affiliations as a consultant, Mr. Pogue has been active in various professional societies and associations. He is a Fellow of the Geological Society of America and of the American Statistical Association, and is a member of the American Association of Petroleum Geologists and the American Institute of Mining and Metallurgical Engineers.

JOSEPH E. POGUE

PIPE CONSUMERS PERFECTING DEFENSE ON RAIL RATE CASE

At a meeting of the Southwestern Pipe Consumers Committee in Tulsa, considerable further progress was made in preparation of evidence to be submitted before the Interstate Commerce Commission to show that a lower scale of rail rates should apply on wrought iron and steel pipe from manufacturing points to the southwest, as well as on shipments within the Southwest.

The Southwestern Pipe Consumers Committee is composed of traffic managers and traffic representatives of oil companies, jobbing and supply houses, and chambers of commerce, and is actively engaged in preparing defensive evidence to prevent a substantial increase in pipe rates in which the oil industry in the Southwest is vitally concerned. Twenty-five traffic representatives attended the meeting, and were joined in Tulsa by the committee's commerce attorney, R. C. Fulbright, of Houston, Tex., and Washington, D. C., who pointed out that the data already assembled led to the conviction that the Southwest should benefit materially by obtaining reduced rates on pipe. The present proceedings are an outgrowth of the decision of the commission in 1928 in the Consolidated Southwestern Rates Cases, wherein rates were prescribed on pipe which would have resulted in substantial increases to the Southwest as a whole had not the committee at that time obtained a suspension of the new rates published by the railroads soon after the commission's original decision. Due to many factors beyond the Pipe Consumers' Committee's control the case has been held in abeyance by the Interstate Commerce Commission since 1930. It was set for hearing in June of this year, and upon petition of the railroads the hearing was postponed to October 14 at Chicago, Ill., and October 19 at Galveston, Tex. Upon receiving a rumor that the railroads were again seeking further postponement the committee dispatched a telegram of protest to the commission and has been advised the application has been denied.

One of the important actions taken at the meeting was appointment of a Truck Rate Subcommittee to assemble and compile data to be submitted at the hearing showing the effect of truck rates on pipe traffic. Van B. Myers, traffic manager, Atlantic Oil Producing Co., Dallas, Tex., was named chairman, to be assisted by W. A. Rowsey, traffic manager, Lone Star Gas Co., Dallas, Tex.; E. C. Kitching, traffic manager, Phillips Petroleum Co., Bartlesville, Okla.; A. F. Winn, traffic manager, Skelly Oil Co., Tulsa, and Harry Graham, traffic manager, Standard Oil Co. of Louisiana, New Orleans.

The Tulsa meeting developed that the work of the consumers committee is being somewhat handicapped by inability to interest all of the shippers and users. The chairman of the Southwestern Pipe Consumers Committee is J. L. Burke, traffic manager, Stanolind Pipe Line Co., Tulsa, and the

vice chairmen are: For Oklahoma, W. W. Klingensmith, traffic manager, Tulsa Chamber of Commerce; for North Texas, W. M. Maddox, traffic manager, Magnolia Petroleum Co., Dallas; for South Texas, J. R. Davis, traffic manager, Humble Oil & Refining Co., Houston; and for Arkansas and Louisiana, Harry Graham, traffic manager, Standard Oil Co. of Louisiana, New Orleans.

OIL GIVEN AN IMPORTANT PART IN SAFETY MEETING

The petroleum section will have an important part in the twenty-fifth national safety congress and exposition to be held in Atlantic City, October 5-9. All meetings of this section will be held in the Japanese room of the Ambassador Hotel. R. B. Roaper, Humble Oil & Refining Co., Houston, Tex., is general chairman. Other officers are: Vice-chairman, A. W. Breeland, Lone Star Gas Co., Dallas, Tex.; Atlantic division chairman, Archer Ashton, Socony-Vacuum Oil Co., Paulsboro, N. J.; Great Lakes division chairman, Glenn Byers, Shell Petroleum Corp., St. Louis, Mo.; Mid-Continent division chairman, R. S. Huffman, Oklahoma Natural Gas Co., Tulsa; Rocky Mountain division chairman, A. T. Eckwall, Stanolind Oil & Gas Co., Midwest, Wyo.; Gulf division chairman, J. L. Manes, Sun Oil Co., Dallas, Tex.; Pacific division chairman, R. B. Hecox, Standard Oil Co. of California, Taft, Calif.; secretary, H. N. Blakeslee, American Petroleum Institute, New York City.

The program for the petroleum section follows:

TUESDAY MORNING, OCTOBER 6

9:45—Report of General Chairman R. B. Roaper.

10:00—"Human Conservation in Industry," Frank W. Lovejoy, Socony-Vacuum Oil Co., Inc.

10:25—"Accident Investigations," (10-minute talks), A. W. Breeland, supervisor of safety, Lone Star Gas Co., Dallas, Tex.; Glenn Byers, assistant personnel manager and safety director, Shell Petroleum Corp., St. Louis, Mo.; Elmo D. Murphey, safety engineer, Mid-Continent Petroleum Corp., Tulsa; W. S. Wilcox, industrial relations manager, Philadelphia division, Socony-Vacuum Oil Co., Inc.

11:30—"What the Community Doctor Should Know of Industrial Surgery," Dr. V. C. Baird, Humble Oil & Refining Co., Houston, Tex.

WEDNESDAY MORNING, OCTOBER 7

9:45—"Some Interesting Safety Methods." (10-minute talks), H. W. Boggess, superintendent of safety, Sinclair Prairie Oil Co., Tulsa; George Lexander, safety supervisor, Boston division, Standard Oil Co. of N. Y., Boston; George F. Prussing, safety engineer, Union Oil Co.

10:45—"Some Problems of Respiratory Protection and Their Solution," C. W. Smith, director safety department, Standard Oil Co. (Indiana).

11:30—Election of officers.

11:40—"A Statistical Review of Accidents in the Petroleum Industry," J. W. Myers, manager insurance division, Standard Oil Co. (New Jersey).

THURSDAY MORNING, OCTOBER 8

9:45—"Visual Educational Methods," Charles A. Miller, supervisor of safety, Texas Co., Houston, Tex.

10:15—"An Oil Company's Influence on the Safe Driving Problem of a Community," B. H. Markham, director, American Petroleum Industries

10:45—"An Analysis of the Motor Vehicle Accident Situation," H. N. Blakeslee, director, department of accident prevention, American Petroleum Institute, New York.

11:00—An Automotive Safety Program for an Oil Company, (15-minute talks), (a) "Drivers of Sales Trucks," (speaker to be announced.) (b) "Drivers of Field Trucks," John D. McCamey, Carter Oil Co., Tulsa. (c) "Executives and Others Whose Driving Is Incidental to Other Duties," John F. Anderson, supervising district engineer, Hartford Accident and Indemnity Co.

THURSDAY LUNCHEON, OCTOBER 8 12:30 O'CLOCK

The 1936 Petroleum Section Safety Contest. (a) "Outstanding Facts," H. N. Blakeslee, secretary. (b) Presentation of Awards, (an officer of the National Safety Council.)

ROYALTY OWNERS MEET CHAIRMAN OF S.E.C.

More than 150 persons from Oklahoma, Kansas and Texas, interested in oil and gas royalties, met Chairman James M. Landis, of Washington, of the Security Exchange Commission, at a luncheon in Tulsa, September 28, and aired their grievances, real and imaginary, resulting from rules and regulations issued by the commission.

The Security Exchange Commission has been functioning since June, 1934, and supervising in a very general way offerings in oil and gas royalties until July 1 of this year when a special branch of the S.E.C. was created to give detailed attention to all royalty transactions. Since this special department of the S.E.C. has started to function there have been misunderstandings on both sides, as freely admitted by Chairman Landis, and it was for the purpose of hearing these complaints at an open meeting that he, together with

JAMES M. LANDIS

C. Roy Smith, head of the oil and gas unit, and John Farnum, attorney for the Securities Exchange Commission, made this special trip to Tulsa from Washington, D. C. Mr. Landis goes on from Tulsa to Denver to attend the meeting of the American Mining Congress, September 28 to October 3 where he is to discuss general problems arising under enforcement of S.E.C. regulations as they affect the mining industry securities.

On September 1 of this year the S.E.C. abolished the exemption clause in the rules and regulations covering oil and gas royalties so that dealers were required to file offering sheets with the commission in Washington, D. C., upon transactions carried on between dealers and of intrastate character. The regulation was exempted because it had been found some dealers were taking advantage of the clause and the general public was being affected by some of the regulations.

In attempting to remove opportunity to take advantage of these clauses in the commission's rules it was decided to withdraw all exemptions and this has seriously affected the dealings between legitimate dealers in all oil states, as well as having a definite bearing upon the sale of royalty between oil companies.

Roy Smith, of Oklahoma City, and Oras A. Shaw, of Tulsa, stated the case for the royalty dealers. Mr. Landis answered the general statements and stated it is the purpose of the commission to call a general meeting of all persons and companies interested in the sale of royalty to meet with the members of the S.E.C. at some convenient place to be selected, some time in November, to discuss these regulations with the idea in mind of developing all weaknesses and injustices in the present law and, if need be, to make definite recommendations to the next congress for a change in the law as it affects oil industry securities. Wesley E. Disney, representative for the First District of Oklahoma was present at the meeting and made a general statement urging frank discussion of these problems and offering his support in working out some solution.

PROGRAM IS ANNOUNCED FOR BITUMINOUS ROAD MEETING

The fifth national road oil and asphalt congress to be held in Tulsa October 8 and 9, is sponsored by the petroleum industry through the Western Petroleum Refiners Association, with the cooperation of highway departments, universities, contractors associations and civic organizations. The program announced by Emby Kaye, general chairman, follows:

October 8—"Asphalt in the Paving Industry," L. M. Law, Shell Petroleum Corp. "Bituminous Mat Construction in Arkansas," Fred Allison, chief chemist, Arkansas Highway Department. 'Developments of Bituminous Surfaces in Kansas," L. L. Marsh, assistant maintenance engineer, Kansas Highway Department. "The Necessity for Asphalt Research," Dr. Sidney Born, Tulsa University.

October 9—"Calcium Chloride for Base Stabilization Before Bituminous Surfacing," Brant Holme, highway engineer, Morton Salt Co. "Soil Stabilization by Sub-Surface Oiling," L. T. Schappler, Missouri Highway Department. "Federal Financing of Highways," Hon. Wilburn F. Cartwright, Oklahoma representative in congress. "Some problems of Bituminous Construction," C. M. Gillette, materials engineer, U. S. Bureau of Public Roads, Fort Worth, Tex. "Bituminous Practice in Montana and Report on Second Montana Bituminous Conference," E. B. Donohue, assistant state engineer, Montana Highway Department.

FEDERAL SALE OF OIL WAITS FOR TEXAS COURT DECISION

WASHINGTON, D. C., Sept. 28.—Following a two days' conference with federal officials Attorney General W. McCraw, of Texas, said the Bureau of Internal Revenue has agreed to withhold threatened sale of 543,000 bbls. of oil in storage in Smith and Gregg Counties to satisfy income tax assessments pending trial in the state court at Austin of the state suit under which it claims ownership to the disputed oil. The state's claim to the oil is based on its power to confiscate oil produced in excess of state allowables. McCraw valued it at about $700,000.

RICHFIELD REORGANIZATION

LOS ANGELES, Calif., Sept. 28.—In a preliminary report to Federal Judge William P. James, the Richfield Reorganization Committee stated a substantial majority of deposited Richfield and Pan American bondholders and all depositing Richfield unsecured creditors had assented to the plan of reorganization, and that only a small percentage of deposited bonds of both classes had been withdrawn.

It is anticipated the committee will shortly petition the court for leave to proceed under section 77B of the National Bankruptcy Act.

INTERSTATE COMPACT MEETING

Gov. E. W. Marland of Oklahoma has sent official notices of a meeting of the Interstate Oil Compact States in Oklahoma City October 2, to governors of member states and of 14 other oil-producing states.

Governor Marland said attempts will be made at the meeting to foster legislation in other states which will allow them to join the compact.

Many Forgetting to Provide for Social Security Pay Roll Tax

(Continued from Page 13)

expenses of certain employes. Not infrequently it is well in excess of the amount actually expended. This excess, under the regulations, must be treated as salary. Difficulties in the way of determining the expenses with precision and thus fixing the amount on which the tax must be paid are apparent, especially in the case of a man who uses his own car and charges traveling expenses.

PROBABLY FORGETTING SOMETHING

Take the case of a company which allows an employe 5 cents a mile when he drives his car on company business. The employe may figure it costs him only 3 cents a mile and that he profits 2 cents on each mile traveled. But the probability is he has failed to count the original cost of the car, which must be amortized on the basis of the total number of miles it is driven throughout his ownership of it. It is likely too that he has forgotten to consider wear on tires and the general cost of upkeep. Under the Social Security Act it will be necessary for him to keep a careful and detailed account of every item of expense in connection with the operation of his car. The company will have to keep just as detailed an account, including the item of amortization.

Some companies turn a car over to an employe for his exclusive use and allow him a flat amount monthly for its operation and upkeep. Here again, it will be seen, further problems arise.

The bookkeeping which the Social Security Act will involve is plainly vast. Some men familiar with the oil company accounting say one-fourth of the time of the accounting staffs will have to be devoted to new work imposed by the new law.

Of interest in this connection as indicating the enormous additions to office expense which a multitude of laws now are placing on oil companies is a statement by S. J. Brill, of the Kendall Refining Co., speaking before the recent convention of the National Petroleum Association in Atlantic City on "The Cost of Government to Business." Mr. Brill quoted the controller of an oil company doing business in various states as saying that his organization was required to make 25,000 reports to federal, state and local governments in the course of a year.

The Social Security Board announced last Friday that an agreement had been reached by which the setting up of initial wage records and the assignment of social security account numbers to an estimated 26,000,000 American workers for whom federal old-age benefits will begin to accrue next January 1 will be conducted by the Post Office Department, in cooperation with the Social Security Board, beginning about the middle of November. The Post Office Department will be reimbursed by the Social Security Board for the expenses involved in this work.

PROPORTION REPRESENTED BY WAGES

What proportion of the cost of petroleum products is represented by the wages and salaries of the men and women who earned them? This concerns not alone persons in the oil industry, but the motorist who consumes gasoline and lubricating oil and all others who use these products—and everybody does use them. Operating costs in all branches of the industry necessarily will increase as a result of social security taxes. This will come about not only through the tax which the oil man himself pays, but through the higher cost of materials, equipment and services which the oil man must buy from others who, like himself, have had to pay the tax.

The total wages and salaries paid in 1929 by oil refiners in the United States amounted to 6.2 per cent of the prices which the same refiners received for their products. If continuance of the same rate in 1936 is assumed, then the amount of the present year's payroll tax of 1 per cent may be approximated by pointing off two places to the left. That is, if 6.2 cents out of each dollar's worth of gasoline, kerosene, vaseline, lubricating oil, etc., represents wages and salaries paid to refinery employes, the payroll tax of 1 per cent for 1936 will amount to .062 cent on every dollar's worth of these products sold. The maximum social security taxes in effect by 1949 paid by the employer alone would be a little less than six times that, or about three-eighths of a cent on the dollar.

The American Petroleum Institute estimates the entire oil industry's payroll for 1934 at $1,216,764,000. A tax of 1 per cent on this would be $12,167,640. On the basis of the same size payroll in 1949, when the social security taxes will have reached their peak, the tax would be $69,355,548.

The foregoing calculation, however, is based on the assumption that oil companies will be carrying pretty much the same range of employes in 1949 that they carried in 1934. Such an assumption cannot be made, for in the marketing branch of the oil industry, for instance, thousands of men who formerly were on oil company payrolls are now independent dealers. These men, with their little staffs of assistants, are no longer employes of oil companies, but are directly engaged in the business of retailing petroleum products and thus themselves are employers.

Many problems which arose as machinery for operation of the Social Security Act was set up in the last year have already been solved, and it is expected that others, including perhaps some of those touched on here, will be removed before payment of the tax begins.

Texas Problem Analyzed by Col. E. O. Thompson

(Continued from Page 10)

compared with Bureau of Mines estimates of 69,512,700 bbls. In only one month (July) has the indicated production been under the Bureau of Mines estimates.

The disposition of crude in Texas, according to Railroad Commission statistics, is indicated in Table 3 which shows that during the first 7 months the indicated production, together with imports from other states and foreign countries, totalled 295,682,538 bbls., while the oil run to stills and shipments to other states and countries totalled 293,924,377 bbls. The storage situation, reflected by stocks above ground on the first day of each month this year, is indicated in an accompanying chart, based on commission reports. (Table 4.) The total figures include not only storage at tank farms, terminals and refineries, and in the fields, but also oil in the lines. It is noted that oil in lines remains fairly constant and should not be included in available storage. Lease storage, since proration, has dwindled to a comparatively small figure.

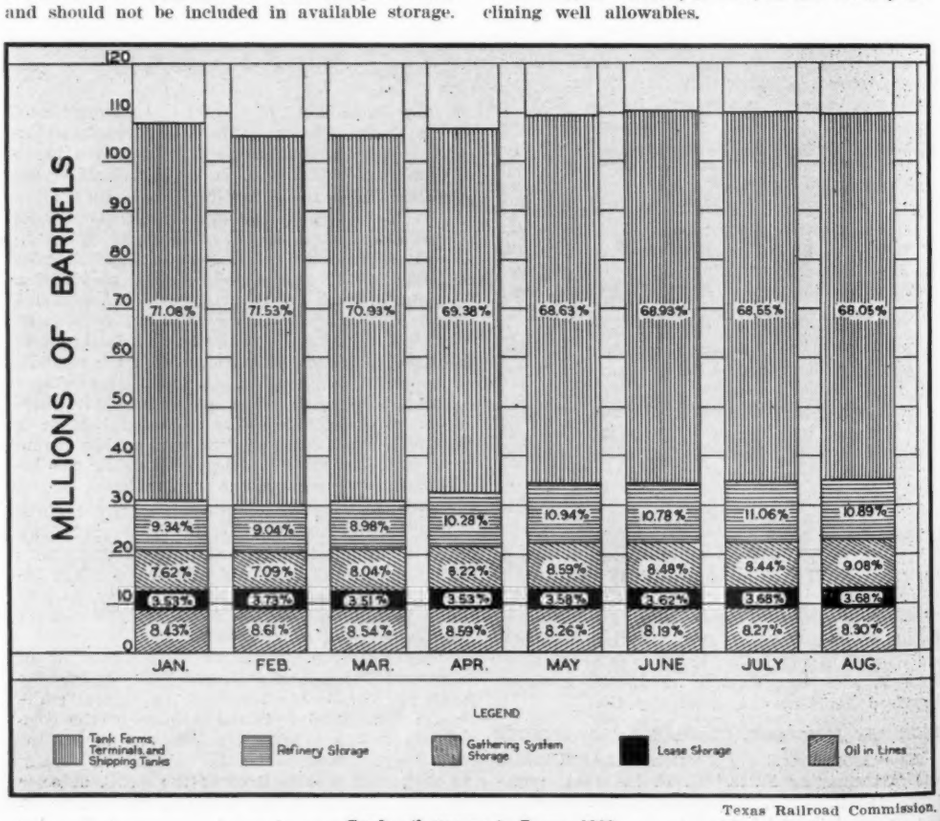
Considerable attention has been directed lately to proposals for changes in Rule 37, (the law which governs spacing of wells), for the restriction of drilling to a wider minimum spacing. Although in a number of fields 10-acre or 20-acre spacing programs have been carried out the general spacing rule permits the drilling of wells as close as 1 to 2.06 acres, which is a spacing providing for locations not closer than 150 feet from a property line or 300 feet from another well. There is no agreement as to what constitutes proper spacing but the more generally accepted recommendation is for one well to 10 acres, or a location not closer than 330 feet from a line or 660 feet from another well.

The wider spacing is advocated mainly by certain major companies who see in it a means of curtailing the intensive drilling being done in some fields, particularly East Texas, to the end that further reductions in well allowables might be minimized. The basing of allowables on potentials in the East Texas no doubt has been an incentive for many operators to drill a large number of wells which has resulted in the lowering of individual well allowables.

Through Colonel Thompson, the chairman, as spokesman, the Railroad Commission has gone on record as being convinced that the greater the number of wells the greater the ultimate recovery of oil, and that if there is to be any broadening of spacing it must be done with the view of prevention of fire or blow-out hazards, rather than on the grounds of limiting drilling. This evidently forestalls any curtailment of drilling by spacing restrictions for that purpose. However, there are many who are of the opinion further reduction in well allowables will automatically tend to curtail drilling by making the production so low the cost of drilling and producing so many wells is not justified.

Advocates of acreage as a factor in determining allowables also are pointing out that if a change is made in the basis of proration to include acreage the situation will be relieved in that there will be no particular inducement for drilling extra wells if a larger proportionate allowable can be obtained from a fewer number of wells.

For the time, however, every indication points to a continuation of the present proration program with operators marking time pending the time when limit is reached, if ever, in the steadily declining well allowables.



Texas Railroad Commission.

Crude oil storage in Texas, 1936

"TUBE-TURNS MADE IT EASY!"

HERE'S just one small job which perfectly illustrates *several* advantages of Tube-Turns★. In the first place, *both* the odd-angle 130° fitting and the 45° elbow were cut from *one* 180° Tube-Turn! This was easily possible only because Tube-Turns have uniform wall-thickness at all points . . . . The full cross-section and the easy sweeping radius of these Tube-Turns will permanently reduce pumping costs . . . . The neatness, compactness and light weight of this Tube-Turn job speak for themselves. May we send you *all* the facts about Tube-Turns? Address: Tube-Turns, *Incorporated*, Herald-Post Building, Louisville, Kentucky.

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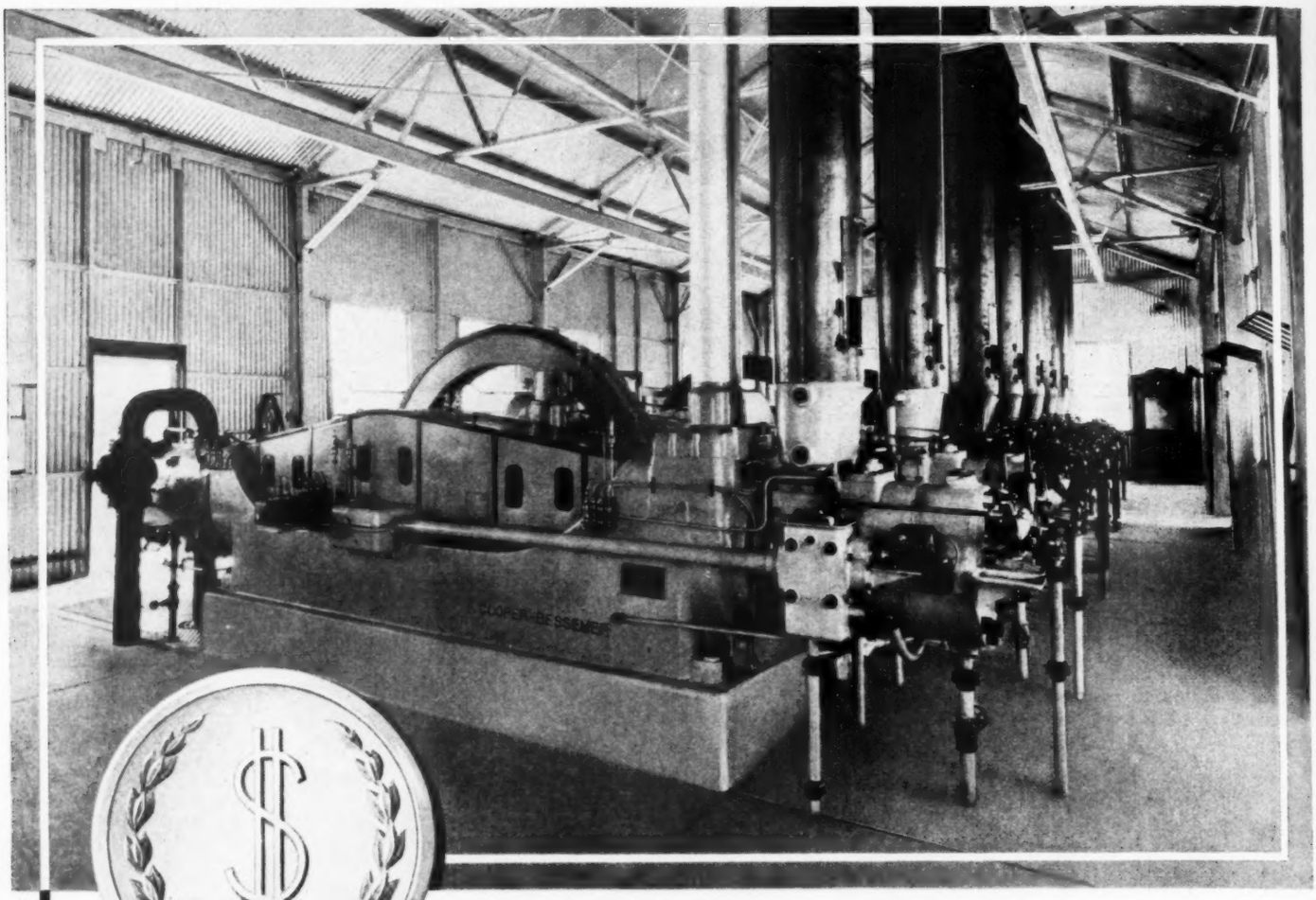

FOR THE QUICKEST RETURN OF YOUR INVESTMENT . . .

better get TYPE 12's

Photographs show interior and exterior of Barnsdall Oil Company's gas-lift and gasoline plant at Oklahoma City, Okla., which contains four Cooper-Bessemer Type 12 twin compressor units.

IF you buy compressor units on the basis of what they will do and what they will save, you will choose Cooper-Bessemer Type 12's.

Earlier models of Cooper-Bessemer compressor units have paid for themselves over and over again — in hundreds of installations. Yet the new Type 12's have still greater earning ability! They combine 2-cycle simplicity with 4-cycle accessibility. Their overall operating economy, stamina, and load-carrying capacity sets a new standard!

Let our representative prove to you in *figures* that Type 12's will "pay out" quickly, wherever you install them.

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Petrography of Oriskany and Corniferous Sands in W. Va.

By DR. JAMES H. C. MARTENS
Head Department of Geology, West Virginia University*

On the basis of composition the formation overlying the Oriskany where it has been reached by drilling in West Virginia may appropriately be called Corniferous, since it is composed mostly of chert of horny appearance. In the samples perhaps the chert is overemphasized by the breaking up and washing out of the much softer calcite occurring with it.

There appears to be everywhere in West Virginia a sharp contact between the Corniferous and the overlying black shale which is classed as Marcellus. In determining the position of the top of the Corniferous, care must be taken not to confuse with it certain calcareous[1] layers or concretions in the Marcellus shale which come some distance above the actual top of the Corniferous, which can be recognized by the presence of chert. Shale cavings in the first few samples of the Corniferous may make the upper few feet of it more difficult to describe than the rest. In some wells the top part is more highly calcareous than the rest, and contains a few feet of material which is predominantly cherty limestone rather than chert. In several wells a small amount of brown silty shale, with a large proportion of biotite, occurs at the top of the Corniferous. This probably forms a thin layer between the Corniferous and the overlying black shale.

UPPER CORNIFEROUS

Approximately the upper 30 to 45 feet of the Corniferous in Kanawha County is gray calcareous chert, and gray, very cherty limestone containing little or no sand, while much of the lower part of the section is sandy chert and sandy calcareous sandstone. The sand is almost entirely very fine, and in some samples it is all embedded in the chert, so in examining samples with a hand lens or binocular it can easily be overlooked. Considering the difficulty of adequate description of such complex sediments, as well as the mixing of material from different beds in the samples, it is not surprising that sections of nearby wells do not correspond in every detail. The actual variation may be less than the apparent. In the J. W. Heinzman well in Roane County, and the Lewis Maxwell well in Doddridge County where the Corniferous is much thicker than it is in Kanawha, there is also a general difference between a lower part which is largely sandy, and an upper part which is not.

The three principal minerals of the Corniferous are chalcedony, quartz and calcite, the characteristic minerals of chert, sandstone and limestone respectively. With these three present in approximately equal amounts in some samples, it is difficult to know the appropriate name to apply. My descriptions are based on observation of the amounts of effervescence with hydrochloric acid and examination of the insoluble residues.

In addition to the three minerals making up the bulk of the rock, several others are present in much smaller quantities. Those considered as authigenic minerals are dolomite, glauconite, barite, pyrite, and sphalerite. Small white dolomite crystals embedded in the chert are fairly numerous in many samples. They are best seen in material which has been treated for two or three minutes with cold dilute hydrochloric acid, which dissolves the calcite, but not much of the dolomite. After longer acid treatment, many chert fragments have rhombohedral cavities, probably left by the removal of dolomite.

In a large proportion of the samples from every well, small bright green grains of glauconite may be seen. These are mostly in the sandy portions of the Corniferous. The proof that these grains are glauconite is not entirely satisfactory, because the refractive index is a little too low. Possibly the lowering of the refractive index is caused by a fine mixture of chalcedony, but glauconite is well known to be a mineral of variable composition and optical properties.

Pyrite is the most abundant heavy mineral and can often be seen with a low power binocular or hand lens. It is present almost throughout, but was removed from many of the samples by hot nitric acid in preparing them for petrographic examination. Yellow sphalerite in small amounts is present in the Corniferous, especially at the top. It was found both in loose cleavage fragments and in grains enclosed in the chert. The preliminary acid treatment of many samples was such that sphalerite, if present, would have been completely removed. The wide distribution of sphalerite is shown by its occurrence in the Lehigh Portland Cement Co. well of John T. Galey, in Beaver County, Pennsylvania, the Endress Hartman well of the Snee, Jaquith & Potter Development Co., in Randolph County, the J. W. Heinzman well in Roane County, and several of the wells in Kanawha County.

Barite occurs in rather small quantities in several of the Corniferous samples, but seems to be irregular in its distribution. Possibly some of it has fallen in from the Marcellus shale above, since the lower part of that formation contains barite where it outcrops in the eastern part of this state.

In the sandy portions of the Corniferous, small amounts of a few other detrital minerals are found in addition to the quartz. Small grains of potash feldspar are present in amounts up to about 10 per cent of the total sand. Heavy detrital minerals are present in very small total quantity. Of these, leucoxene and zircon are relatively most abundant, with much less of tourmaline, and very scare rutile. The few grains of garnet and muscovite noted are probably the result of contamination of the samples.

ORISKANY SANDSTONE

The Oriskany sandstone is light-gray to white, but many of the samples of drill cuttings are brown from large amounts of rusty metallic iron or gray due to contamination by dark shale fragments.

Most of the samples of Oriskany sandstone are moderately to highly calcareous, but some, including the gas pay in some wells, are only slightly calcareous. Usually the highest proportion of calcium carbonate is toward the base of the formation, and there may be an apparent graduation into impure limestone below. The texture of the quartz sand varies from medium- to fine-grained, for the most part, but there are occasional streaks of coarser material. The grain size seems to be usually smaller toward the bottom. Chips of any considerable size are scarcely ever present in the drill cuttings and some samples are broken even finer than to the size of the individual sand grains. Minerals other than quartz and calcite are usually scarce, but in some wells, especially No. 433 of Libbey-Owens, at South Malden, there is a concentration of glauconite at the top and along with it considerable pyrite. Glauconite occurs either very sparingly or not at all in the rest of the Oriskany.

The only additional light mineral seen is potash feldspar, which occurs as scarce detrital grains about the same size as those of quartz or a little smaller. The amount of it relative to quartz is much less than in the sandy portions of the Corniferous.

The heavy minerals formed in place are pyrite, barite and sphalerite. From many samples all or a considerable part of the pyrite and sphalerite were removed by acid treatment before examination with a petrographic microscope, but there is no doubt that pyrite is present in all the wells and in nearly every sample. Barite is much more irregular than pyrite in its distribution. It is well known by the Oriskany samples from No. 1 M. F. Copenhaver heirs, and Columbian Carbon Co. No. 12 Kanawha City, Godfrey L. Cabot No. 1 Pius R. Levi, and Benedum & Trees Oil Co. No. 1 J. A. Hill; but occurs in others also. It apparently is in the cement of the sandstone since some quartz grains have been sunk by attached barite. Tests were not made on every sample to distinguish between barite and celestite, so it is possible that celestite may also be present. Sphalerite appears to be at least as widely distributed in the Oriskany as in the Corniferous, and sphalerite was found in the Oriskany sandstone in the Eckle school section, near White Sulphur Springs, Greenbrier County.

The total amount of heavy minerals in the Oriskany is small, generally under 0.01 per cent after removal of pyrite. The heavy detrital minerals persistently present in the Oriskany sandstone samples examined are few, and are minerals which are present in most sandstones. They include zircon, leucoxene, tourmaline, and rutile. The tourmaline is of several varieties; brown, green, and blue, with some grains showing more than one color. A considerable proportion of the samples, representing most of the section of the Endress Hartman and J. W. Heinzman wells, contain some tourmaline grains on which there has been

*Paper delivered at September meeting of Appalachian Geological Society.

[1]Selinsgrove Limestone of I. C. White, Onondaga in age.

This article by Dr. James H. C. Martens, head of the Geological Department, West Virginia University, Morgantown, W. Va., is a timely discussion based on recent petrographic study of the Oriskany and Corniferous sands in West Virginia, center of interest in Eastern oil developments. Several new Oriskany gas and oil fields have been recently opened in southeastern Ohio, southwestern Pennsylvania and western West Virginia. Over 40 tests are now drilling to the deeper Oriskany sands. ¶Dr. Martens examined partial or complete sets of samples from about 20 Oriskany wells in Kanawha County, and one each in Boone, Roane, Doddridge, and Randolph counties, West Virginia, and one in Beaver County, Pennsylvania. Samples were taken from one deep well in Harrison County and one in Fayette County, Pennsylvania, which have reached the Corniferous, but not the Oriskany.

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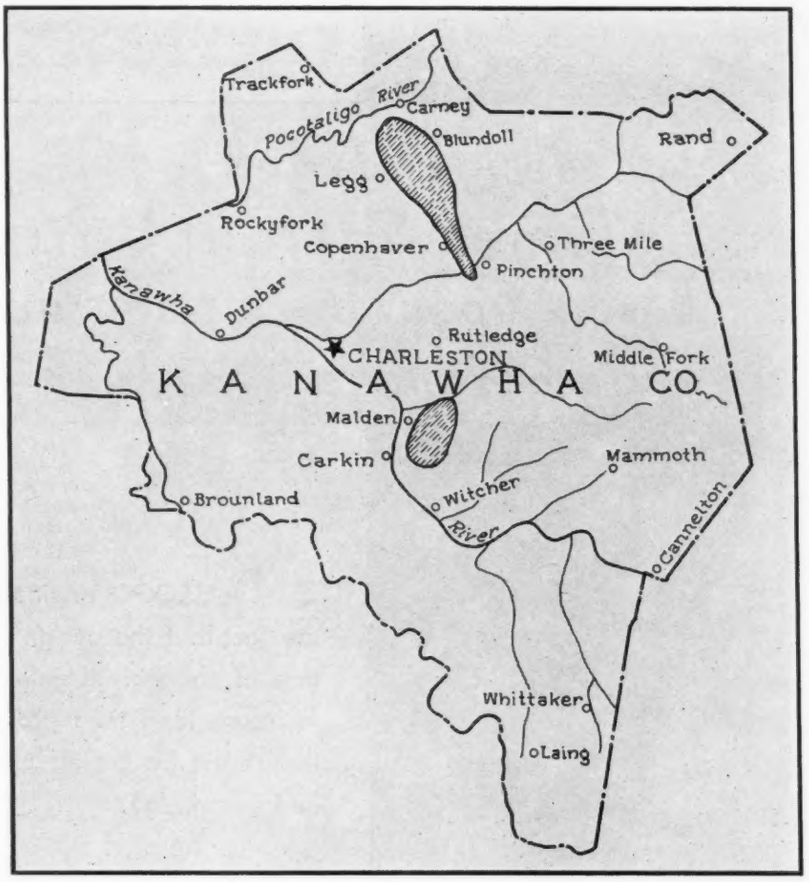
a secondary growth of nearly colorless tourmaline such as was found by M. H. Stow in the Oriskany sandstone from many localities. Other minerals occurring in some of the well samples in very small amounts and probably not due entirely to contamination, are monazite, xenotime, anatase, muscovite, and garnet. Several other minerals have been found, but are probably the accidental contamination of the samples.

What is considered as typical Oriskany sandstone in Kanawha County is not cherty like the overlying and underlying formations. The small amounts of chalcedony found in many samples must have dropped in from above, because they do not enclose grains of the size and roundness of those composing the Oriskany.

Marcellus H. Stow[2] has determined the mineral composition of a large number of Oriskany sandstone samples from many localities, and with few exceptions found only the minerals reported here as most persistent. I agree entirely with this conclusion that most of the sand composing the Oriskany is derived from older sandstones rather directly from igneous or metamorphis rocks. The evidence from the well samples is more conclusive than that from outcrop samples because we can be sure that recent weathering has not destroyed any of the minerals in the well samples. The principal reasons for believing that the sand was derived from older sediments are the very small amount of feldspar and mica, the fairly high degree of rounding of at least the coarser grains, the very small total amount of heavy minerals, the small variety of heavy minerals, and the fact that they are very persistent minerals not easily destroyed by weathering or abrasion.



Shaded areas indicate Oriskany sand production in Kanawha County, W. Va.

With the heavy detrital minerals limited to such common ones, satisfactory correlation can hardly be made by them alone. The presence of the authigenic minerals mentioned, especially sphalerite, is perhaps more important. The relative amounts of the very common detrital heavy minerals may have some significance, but because of varying conditions of sedimentation, we cannot expect the relative amounts to be constant over any considerable area even where all of the material was derived from the same source. On the outcrops in Greenbrier County the heavy minerals of the Oriskany and Healing Springs sandstones are similar, but in the Clifton Forge and Keefer sandstones lower down in the section, tourmaline is more abundant relative to other heavy minerals.

VARIATIONS IN THICKNESS OF ORISKANY AND CORNIFEROUS

The thickness of Oriskany and Corniferous in a few rather widely separated wells are given below:

Company—	Well	Location—	Thickness—Corniferous (feet)	Thickness—Oriskany (feet)
Pond Fork Oil & Gas Co.	No. 22 Cole and Crane	2.5 mi. S. of Madison, Boone Co., W. Va.	53	8
Benedum & Trees Oil Co.	No. 1 J. A. Hill	Jefferson Dist., Kanawha Co., W. Va...	85	24
West Virginia Gas Co.	No. 0-012 D. A. Griffith	Poca Dist., Kanawha County, W. Va..	106	10+
United Fuel Gas Co.	No. 4,053 J. W. Heinzman	Curtis Dist., Roane County, W. Va.....	170	78
Columbian Carbon Co.	No. 11-F Lewis Maxwell	West Union, Doddridge County, W. Va.	248?	143?
Snee, Jaquith & Potter Dev. Co.	No. 1 Endress Hartman	Kerens, Randolph County, W. Va.....	197	115
J. H. Duff and J. T. Galey	No. 1 Lehigh Portland Cement Co.	Muddy Creek Twp., Beaver County, Pa..	139	28

The well at Summit, Pa., has penetrated the Corniferous to a depth of 30 feet. Most of this was chert which was only slightly calcareous.

Some of the variations in thickness of the Corniferous recorded in Kanawha County are too small to have much significance. However, there is no doubt that there is a thinning westward from farm have only slightly less. Possibly the thickness of 106 feet at the West Virginia Gas Co.'s D. A. Griffith well in Poca district is too low since the depths on the samples are not entirely consistent with the log, and according to the samples the top of the Corniferous is 11 feet higher, making the thickness of the Corniferous 117 feet.

East of the Charleston district, the Corniferous apparently maintains about the same thickness for a considerable distance, since 107 feet is recorded of the Godfrey L. Cabot No. 52 A. D. Huntington, near the east edge of Kanawha County. The outcrops of Huntersville chert nearest to Kanawha County are near White Sulphur Springs, about 60 miles southeast of the A. D. Huntington well. The Hundersville chert there is calcareous, sandy, and glauconitic, showing a very close resemblance to the Corniferous as encountered in wells. The Huntersville chert in the outcrops shows a sharp contact with the Marcellus shale above the Ridgeley sandstone below. However, in the Eckle school section there is between the Huntersville chert proper and the overlying Marcellus, an 8-foot bed of fossiliferous sandstone. Nothing corresponding to this has been found in the well samples.

The minimum thickness of Oriskany in Kanawha County, as shown by samples from wells which went all the way through it, is 17 feet: the maximum 47 feet, and the average for seven wells is 31 feet, while the average penetration of the Oriskany in 12 wells which did not go all the way through it, is 23 feet. The greater thicknesses of Oriskany in some wells to the north of Kanawha County have already been mentioned. On Brown's Mountain anticline in Pocahontas and Greenbrier Counties, the Oriskany (Ridgeley) varies in thickness from 15 to 20 feet in four sections measured by Paul H. Price, while to the northeast in Pendleton County it is much thicker.

In some wells in Kanawha County a second noncherty sandstone is found a short distance below the one here designated as Oriskany.

BELOW THE ORISKANY

Below the Oriskany sandstone in these wells in gray cherty and sandy limestone, and sandy calcareous chert, which in part is similar to the overlying Corniferous. It contains the same small green specks of glauconite. Where the Oriskany is missing or very thin, the similarity of the overlying and underlying formations may make it difficult to tell when the stratigraphic position of the Oriskany has been passed. This chert and impure limestone below the Oriskany probably represents some part of the Helderberg group, or the Shriver chert, or both.

[2]Thesis, Cornell University, 1931.

Socony Purchase

Socony-Vacuum Oil Co., Inc., has acquired the fixed assets of Pennsylvania Oil Co. of Evanston, Ill., it is announced by Bryan S. Reid, general manager of Socony-Vacuum's Chicago division. Pennsylvania Oil Co. was founded in 1911, its business being conducted through four bulk plants at Evanston, Highwood, Niles Center and Desplaines and through 12 controlled service stations and 43 dealer sales outlets.

Texas Allowable Increased by 54,000 Barrels Daily

AUSTIN, Tex., Sept. 29.—Texas oil allowable for October was set by the Railroad Commission today at 1,179,948 bbls. daily, an increase of 54,000 bbls. over September 1 and about 6,000 bbls. over September 26. This was 73,000 bbls. higher than Bureau of Mines figures for Texas share of the national market.

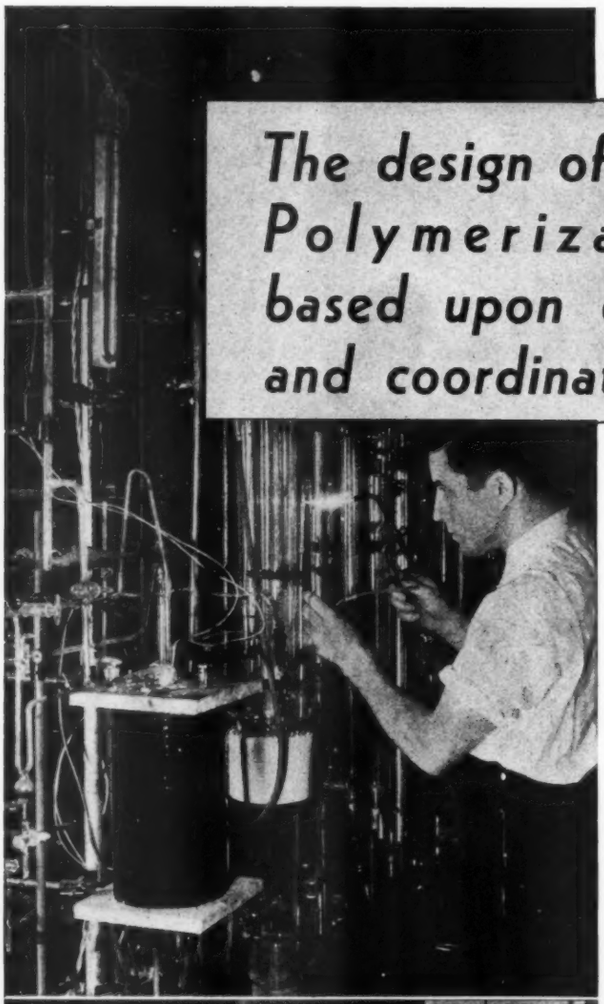
Chairman Ernest O. Thompson protested that the national storage now is only an 86-day supply, and the policy of further restriction is encouraging the building of South American plants to use foreign oil.

Colonel Thompson protested the increases allowed New Mexico and Louisiana by the Bureau of Mines estimate, while Texas share was cut 17,000 bbls. by it, and announced a fight will be made in the Interstate Oil Compact Commission meeting at Oklahoma City Friday on these discriminations.

OBITUARIES

EDWARD S. MacMILLAN, field representative of the British American Oil Co., died at Calgary, Alberta, recently.

A. S. HENLEY, geologist, who helped locate some of the first natural gas reserves which supply Houston, Tex., with cheap fuel, died at his home in Glendale, Calif., recently. He was chief geologist for Houston Oil Co. from 1923 to 1926.



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Changes in Station Operations

No Marketing Panacea

By C. O. WILLSON

The movement away from retail station operations by major oil companies is having repercussions, some of which were not accurately gauged earlier in the year and are unwanted.

While this important merchandising step is still believed to be basically sound and desirable—evidenced by the fact that it continues to expand rapidly—it is also becoming apparent that a change in station operation is not in itself a panacea for the ills of petroleum marketing. Problems are unfolding which will require prompt solution if this shift in operating policies is not to be accomplished by serious disturbances that will be felt throughout the entire industry.

As explained by one executive who has been connected with oil marketing for many years, the fundamental problems in retail marketing center around the superfluity of outlets and the diversity of services offered. Changing stations from company owned to independent dealer operation does not alter this basic situation and might conceivably aggravate it.

From the standpoint of the industry as a whole, the transitory period now under way over a wide front, if not properly directed, is a threat to price stability and continued profits. One of the arguments advanced in favor of dealer-operated stations is that the operator becomes more price conscious due to the fact that the margin on which he operates is determined by himself. In the past, with margins guaranteed by the supplier, many operators were not concerned with the maintenance of retail gasoline prices which were in line with the cost of producing, transporting and refining crude oil as well as marketing the finished products.

The plan of placing the dealer "on his own" as regards prices charged his customers is unquestionably sound according to those who have studied the matter from all angles. The success of the plan over a period of time, however, will depend entirely on whether or not the suppliers weaken in their positions during the inevitable adjustment periods in which price-cutting develops. Many suppliers have already been confronted with this situation. Dealers no longer under the control of the major companies at many points have seen fit to reduce their prices, obviously hoping to more than make up in volume what they lose in price. Some of these price reductions, it is known, have been accomplished by secret rebating and other forms of price cutting which are particularly objectionable.

The immediate result has been requests from dealers for protection from companies which furnish them gasoline and other products on a delivered tank-wagon quotation. If the suppliers accede to the request their net return will be reduced and this ultimately will react back to the refinery tankcar prices.

The significance of this situation has been apparent in recent weeks while refining organizations led by the Standard Oil Co. (Indiana) have gradually withdrawn from retail operations throughout the Middle West and Mid-Continent through the adoption of the "Iowa" plan of operation. This withdrawal from retail postings is necessitating changes in contracts with jobbers as well as dealers.

These refiner-jobber contracts for several years usually have been based on retail prices which no longer will be posted. The immediate problem is to work out new contracts based on prices to dealers as quoted by major companies. These delivered tank-wagon prices in the case of regular and premium grade gasolines in Iowa and many other points in the Middle West have given the dealer a 3½-cent spread on which to operate, provided he maintains the normal retail price for his area.

For example, if the delivered tank-wagon price at a given point is 11 cents, the normal retail price is 14½ cents exclusive of state taxes. Under the usual type refiner-jobber agreement the jobber buying in tankcar lots would be given a 5½-cent guarantee under the service station price, which in this case would be 9 cents. In the states mentioned, this latter type of agreement is no longer possible. To arrive at the same end in the case of jobber contracts it has been suggested that the guarantee to the jobber in tankcar purchases be 2 cents under the posted dealer prices on tank-wagon deliveries. This 2 cents plus the 3½ cents allowed the dealers would give the 5½ cents provided for under the existing agreements.

Refiners, in some cases, are having trouble in making new agreements on any basis which would assure them a net tankcar price comparable to what they have had in the past. The jobbers want additional protection due to the contention that dealers leasing stations from large companies are not maintaining retail prices 3½ cents above the delivered cost. Cases are cited in which oil companies have jobber accounts and dealers operating their stations in the same area and are now faced with the problem of making new jobber contracts.

Not only is this situation undesirable from the standpoint of its affect on contract prices but it is also certain to influence spot or open-market prices on gasoline if it continues over any length of time. Market students have explained the recent weakness in tankcar gasoline prices in the Mid-Continent and Middle West as partially due to the unhealthy situation at several points in retail price structures.

This price situation goes to the root of the problems with which many companies have been confronted in giving up control of company-owned or leased stations to dealers. This plan in its present form gained support starting last year following the passage of a chain-store tax in Iowa which included retail service stations. Under the Iowa plan, companies leased their company-owned or controlled stations to dealers. The companies continue to supply the stations but give up all control over their operations. Gasoline and other products distributed at the stations are sold by the company owning the station on delivered tank-wagon price schedules. Under this arrangement the station legally is considered individually operated and the company owning the property is not subject to a chain-store tax.

This plan of leasing stations has been adopted by major companies in other states including those which do not have chain-store taxes. The terms of the agreements vary in some states but the general objective of all is to free companies from the responsibilities incidental to other types of operation. The spread of the plan has been due not only to the chain-store taxes but also a desire on the part of large operators to lessen their responsibility under federal and state social security programs. Legislation concerned with minimum wage and maximum hours of employment has also been a factor as has the activities of trade unions which seek to extend their activities in all branches of the oil industry.

President C. L. Suhr, National Petroleum Association, greeting Representative Wright Patman, co-author of the Robinson-Patman Act

INEXPERIENCED DEALERS

The plan adopted by many companies is to turn their stations over to those who have been operating them on a commission or a salary basis or a combination of the two. This is not working out satisfactorily in all cases. The successful station operator is not always equally successful when he takes over the added responsibilities which involve bookkeeping, payment of rentals, purchase of supplies and other activities which are part of operation when the dealer becomes entirely independent.

Some observers believe that this situation is so serious that they are certain that the plan of having hundreds of thousands of individually operated stations is unsound and ultimately some revision will be necessary. They point out that due to differences in ability and training, many dealers will be able to expand their gallonage while others will not hold their own. Left to their own devices there will be a tendency among the latter to cut prices and inaugurate other practices which will prove disturbing to markets.

It is said that among many dealers there has been a noticeable letdown in standard of service. This is disturbing to concerns which over a period of years have established an enviable position in that regard through rigid control of their outlets. This failure to keep stations clean and give customers the many services which have become a part of operation not only means less business at these outlets but all other stations selling the same brand of products.

One company official who has made a special study of this entire problem says that the success of the plan of having stations operated by independent dealers rests with the companies supplying the products. He says there must be uniformity in regard to rentals and everything else that is part of the cost of station operation as well as prices so that one dealer does not have an unfair advantage over another. In the end he predicts it will be necessary for companies to abandon those retail units which cannot hold their own in the many competitive situations that are certain to result. Some of these units are poorly located and do not have the facilities to provide the required services.

He also feels that dealers displaying special ability will shortly be operating more than one station. These multi-unit operations will be on a sound basis and should gradually strengthen their position with increased gallonage per unit through the elimination of those who have no real place in the merchandizing of petroleum products.

Oil News from Foreign Lands

Imports by Great Britain

A decrease of 632,000 bbls. in gasoline imports to the United Kingdom was registered during the first six months of this year, but increases in other petroleum products shipped to that country more than offset the lag in one item. An increase in 7,008,000 pounds in imports of wax was registered, but all of the increased business was with British India suppliers and with small producers classified as "others." The United States and Poland were the chief sufferers in transfer of the bulk of United Kingdom wax business to British India. Favoritism in purchases of gasoline was shifted to British possessions and Rumania to the detriment of the United States, Iran (Persia), Mexico, Russia, Netherlands East Indies and "others." Due to expansion of refinery capacity in England and modernization of equipment previously in operation, crude oil imports increased more than 300,000 bbls. to a total of 7,742,000 bbls. for the first six months of this year, compared to 7,404,000 bbls. over the same period in 1935. The Netherlands West Indies, Iraq, Iran and Venezuela were the countries increasing their shipments to England the first half of the year. Countries losing crude oil traffic to the United Kingdom included Mexico and Peru.

UNITED KINGDOM

The United Kingdom's imports of lubricating oils to total 1,752,000 bbls. for the first half of 1936 were increased from all sources with the United States furnishing more than three times the volume from the next competitor, Russia.

Details of United Kingdom petroleum imports for the first half of 1936, compared to the same period in 1935, are shown in the table:

UNITED KINGDOM IMPORTS

(Data from Bureau of Mines)

Supplying Country:	Crude oil Jan.-June 1936	Crude oil Jan.-June 1935	Gasoline Jan.-June 1936	Gasoline Jan.-June 1935
British countries	152,000	138,000	.....	.....
West Indies (N)	1,302,000	336,000	8,333,000	7,876,000
Iraq	2,347,000	2,196,000	.....	.....
Iran (Persia)	1,581,000	1,300,000	3,187,000	3,988,000
Mexico	160,000	1,670,000	571,000	917,000
Venezuela	897,000	337,000	.....	.....
Peru	1,053,000	1,246,000	.....	.....
Br. W. Indies	.....	.....	1,246,000	871,000
Other British	.....	.....	70,000	33,000
Russia	.....	.....	818,000	821,000
Netherlands E. Indies	.....	.....	235,000	517,000
Rumania	.....	.....	1,429,000	1,076,000
United States	.....	.....	1,538,000	1,705,000
Other	250,000	181,000	182,000	437,000
Total	7,742,000	7,404,000	17,609,000	18,241,000

Peru and Colombia Output

Peru's crude oil production continued its upward climb in August averaging more than 49,260 bbls. daily, including 6,161 bbls. per day by Lobitos Oilfields, Ltd. Balance of Peru's crude output was produced by International Petroleum Co., Ltd. (Canada). At the same time, Colombian crude production declined to 1,553,606 bbls. for the month, compared to 1,585,345 bbls. in July and to 1,567,307 bbls. in August, 1935. The daily average production in Colombia for the past month was about 50,116 bbls. All Colombian crude is produced by the Tropical Oil Co. (International). Despite the trend indicated by August production figures, production from both South American countries is running somewhat above yield for the first eight months of 1935. Colombian production from January through August this year amounts to 12,401,230 bbls., compared to 11,831,280 bbls. for the same period in 1935.

COLOMBIA and PERU

Peru's crude production, exclusive of the estimated 6,000 bbls. daily from properties of Lobitos Oilfields, Ltd., totals 9,940,678 bbls. for the first eight months of 1936, compared to 9,803,580 for the same 1935 period.

The following table showing comparative crude production data for the two countries does not include Lobitos' yield of about 6,000 bbls. daily:

CRUDE OIL PRODUCTION

(Figures in barrels)

Month—	1936	1935
Colombia		
August	1,553,606	1,567,307
July	1,585,345	1,639,054
January-August	12,401,230	11,831,280
Increase	569,950	.....
Peru		
August	1,336,084	1,272,038
July	1,325,419	1,276,305
January-August	9,940,678	9,803,580

California-Texas Oil Co.

Physical cementation of marketing, production and refining facilities of Standard Oil Co. of California and Texas Corp. was carried into China last week under the banner of the California-Texas Oil Co., Ltd. Establishment of the California-Texas organization to effect the consolidation was launched several weeks ago in New York. Officials of the two companies involved, including James A. Moffett, chairman of the California-Texas Oil Co., Ltd.; K. R. Kingsbury, president of Standard Oil Co. of California, and Capt. T. Reiber, chairman of Texas Corp., have been abroad several weeks perfecting final arrangements for consolidation of physical assets.

MARKETING

The marketing territory of the new California-Texas concern includes Asia, Australia, New Zealand, East and South Africa, with crude oil production established on Bahrein Island and on the Saudi Arabia mainland. The refinery at Bahrein, which is scheduled for expansion, will provide finished products for the Far Eastern market at greatly reduced transportation costs. At the same time Texas Corp. established marketing facilities and established sales outlets will eliminate expensive duplication through the combination.

Far East Marketing

Position as a transhipment center in middle Asia makes the British Malaya, centering around Singapore, one of the key marketing spots for petroleum products in the Far East. To a lesser degree the country offers an internal market of some proportions. British Malaya is a feeder of oil products to Japan, Australia, New Zealand, South Africa and several other nearby southeastern Asiatic countries, the United States Department of Commerce reports. Out of a total of 3,014,265 bbls. of gasoline imports in 1935 accounted for by the Malayan government, only 532,128 bbls. were retained for internal consumption. A tax of 35 Straits Settlement cents per imperial gallon, however, makes the gasoline traffic one of the chief sources for government revenue. Duty was paid on 21,761,842 gallons during 1935 and the consumption so far this year is running from 6 to 10 per cent above that figure. There are 27,504 passenger cars, 7,045 trucks and 1,999 buses in use in British Malaya accounting for nearly all of the internal consumption.

MALAYA

While the gasoline business is carried on through the two major companies now established in Malaya the lubricating oil sales are through a variety of outlets. The country consumes approximately 3,000,000 gallons of lubricating oil annually and there are more than 30 brands offered. Gasoline sells for 80 Straits Settlement cents per gallon in British Malayan retail channels. The dealers pay 75 cents to the companies, and they in turn divert 35 cents per gallon to the government. Most of the gasoline is supplied from Netherlands Indies which is also the chief source for lubricating oil with the United States second. Nearly 85 per cent of the lubricating oil sold is of an inexpensive, inferior quality. Railways and the mines are the chief consumers of lubricating oils in the Malayan federated states.

Jugoslavia-Rumania Oil

Details of an important new agreement between Jugoslavia and Rumania for supplying petroleum products to the former have been communicated to the Little Entente Council by Doctor Stoyadinovitch, the Jugoslavian premier, according to a dispatch from Belgrade. According to the report, Rumania agrees to supply Jugoslavia immediately with all oil and gasoline for army and navy air forces and agrees to put at the disposal of Jugoslavia certain Rumanian oil fields which Jugoslavia would exploit directly through a specially created oil and gasoline monopoly. Jugoslavia has agreed that it will not take supplies of oil and gasoline from other sources.

JUGOSLAVIA

Moving boilers in jungle land of Sumatra

Watch for bargains

Government officers are surveying long-stored stocks of crude oil

"The contention is made," they say "that much crude oil in storage for years is not suitable for gasoline production but is only fit for fuel oil"

Dubbs refiners would like nothing better than to get that weathered crude at the price of fuel oil

It's ideal to produce the best kind of gasoline by Dubbscracking—and plenty of it—Dubbscracked gasoline

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the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by THE PETROLEUM PUBLISHING COMPANY at Tulsa, Oklahoma

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Forget It!

The proposal in some oil producing states to raise their share of social security appropriations by increasing the severance tax on oil will not stand analysis.

Wholly apart from its effect on the oil industry it is indefensible considered on any principle of justice or fairness.

The social security legislation, whatever may be thought of its form, is based on the principle that everyone should contribute his or her share for the common purpose of assuring security to those who need it. It is in this sense a debt of honor as well as a duty of citizenship to meet this obligation without equivocation or evasion.

The federal appropriations are based on this principle and the several states participating are expected to raise their share within their own borders.

It might seem at a hasty first glance that oil producing states might easily raise their share by the simple expedient of increasing the severance tax on oil. The taxing authorities might even assume popular approval of putting the load on the oil industry. But it is not so simple as that.

The oil producing states owe their possession of that resource to the happy accident of location. It has never been assumed that these lucky states have any inherent right to withhold oil from the people of other states until they paid an unreasonable price for it.

It has been recognized that the oil producing states are entitled to a reasonable tax on the production of an irreplaceable natural resource but that is entirely different from this proposition to levy an additional tax on oil for the express purpose of meeting an expense that in other states is borne by general taxpayers.

What it means, in the last analysis, is that since this additional tax, it enacted, must be figured in the cost of oil and consequently in the price paid for petroleum products by the consumers throughout the country, the cost of the social security laws in the oil producing states must be borne mainly by the consumers of those products in the other states.

This is utterly opposed to the whole theory and practice of the social security legislation which rests upon individual responsibility. But that is not all.

If oil producing states persist in this scheme it will offer the advocates of federal control of the oil industry a new provocation for resuming their agitation. It is easy to imagine the effect it might produce in other states which would rightly object to this transfer of the social security burden of oil producing states to their shoulders.

It seems a slick scheme but it will be safer to forget it.

AN OIL MAN'S CEMENT

'STARCOR' IS SPECIALLY MADE FOR USE IN DEEP HOLES AND WHERE TEMPERATURES ARE OVER 140°

When bottom-hole temperatures exceed 140°, the going gets tough. The deeper the well, the greater the risk that ordinary cement may stiffen before it gets in place. Thinning the slurry isn't the answer—because that may mean a soft core . . . What to do about it?

Two years ago we asked ourselves the same question. Oil men knew, and so did we, that no cement then available would fill the bill—not even 'Incor' with a ten-year record of outstanding oil-well performance where temperatures are less than 140°.

A different type cement was needed—a cement specially made for oil men to use in deep holes and where temperatures are over 140°.

Lone Star research chemists went to work to perfect a cement that would set slowly at high temperatures. That of itself wasn't so difficult. But the cement also had to pump easily, hold its water, and hang together so as to resist mud-contamination. It wasn't an easy job to combine all of these qualities in one product. But Lone Star chemists succeeded—just as they did years before with 'Incor'. This time they perfected an Oil Man's cement.

This Oil Man's cement is called 'STARCOR'. It does everything we wanted it to do—and more. For laboratory proofs have been confirmed by field results in dozens of deep holes. Here's the net of it:

'STARCOR' pumps easily at 16 lbs. Sets slowly, even in hot holes. Yet, it hardens quickly. Cores cut at 3 days are hard and uniform, free from soft spots. "Cuts like a piece of solid formation," drillers say. Chemical tests of cuttings prove absence of mud contamination. And, in addition, 'STARCOR' is made to resist the effects of sulphate waters —assuring a long-life, gas-tight plug.

So, 'STARCOR' can honestly be called an Oil Man's cement, with the safety factor against quick-set built right into it at the mill—you don't have to try to get it by thinning down the slurry.

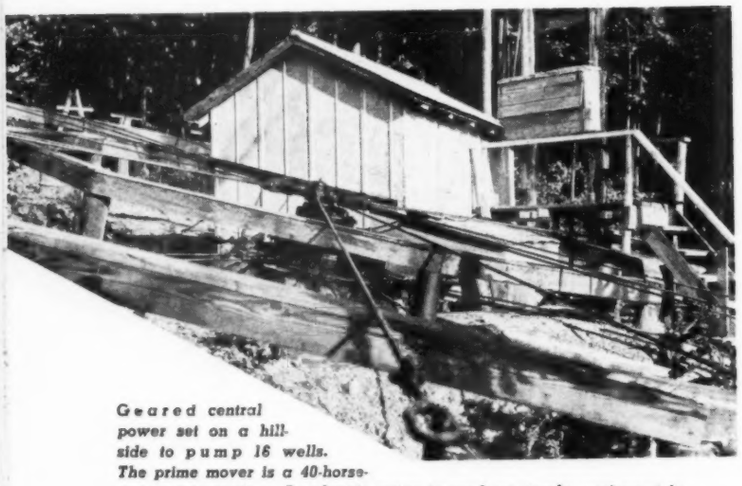
And 'STARCOR' is a Portland cement in all that the term implies. No adulterants or admixtures are needed. 'STARCOR' has all the desirable strength, durability, workability and other valued properties of 'Incor' and Lone Star—plus the made-to-measure qualities needed for deep-hole work. Use 'STARCOR'† on your next job—see what a real Oil Man's cement is like. Any Lone Star and 'Incor'* Dealer can supply you.

* Reg. U. S. Pat. Off.
† Pat. applied for

LONE STAR CEMENT COMPANY TEXAS

Makers of LONE STAR CEMENT • 'INCOR' 24-HOUR CEMENT • 'STARCOR' CEMENT

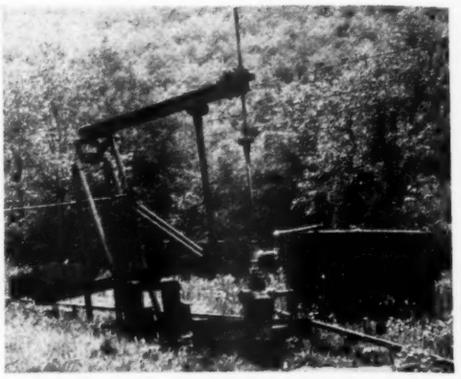
Equipment Used in Field Example of L



Geared central power set on a hillside to pump 16 wells. The prime mover is a 40-horsepower gas engine. An electric motor is used as standy equipment in case there is a shortage in the supply of gas

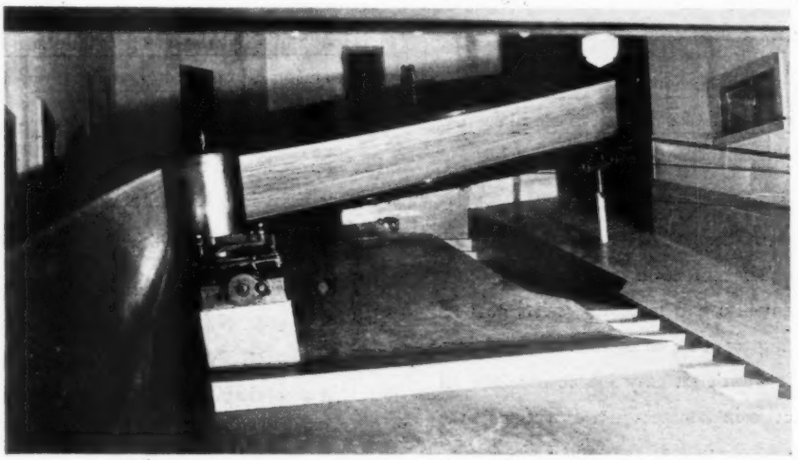
Unlike most old oil producing areas, the Bradford field is conspicuous for the large quantity of equipment used of up-to-date or advanced design. The present price of Pennsylvania Grade crude oil, which is $2.45 per barrel, has favored the installation of better equipment and has brought about the development by the water-flooding method of many more leases, so that at present the old, worn equipment is greatly outweighed by new installations. Since the selections and methods used in installing the new equipment in this field are the result of many years of experience in operating wells of this class, an investigation of some of this new equipment may be of value. Of especial interest are the different types of high-pressure pumps used in water-flooding.

The majority of the wells in the Bradford field are pumped by rod lines from central powers. Bandwheel and geared powers are both popular. The striking thing about these installations is the fact that they are generally set tilting at a considerable angle to conform to the slope of a hillside. The field is situated in a country featuring high hills or ridges with steep, rather uniformly sloping sides and narrow valleys. Most of the oil field is quite heavily wooded. The typical lease is situated on a hillside, so that the surface of the lease is represented by a plane, though a very steeply dipping one. In setting the central powers so that their eccentrics lie parallel to the plane of the hillside, much unnecessary friction is avoided which would result from having to change the direction of motion of the rod lines if the powers were installed in a horizontal position. Powers are set at angles varying from 0 to 25 degrees. A gas engine is usually used as the prime mover at the central power. On one lease at Indian Creek, owned by the Penn Valley Crude Oil Corp., where the production is valued at $500 per day it is not considered wise to run the risk of losing production due to frozen gas lines or shortage of gas. For this reason an electric motor has been installed beside the gas engine so that in case of emergency the belts can be removed from the gas engine's pulley and put on the motor's pulley. The electric motor then operates the lease on purchased power until the gas engine is ready for service. Since the gas supply in the Bradford field is becoming uncertain, it is expected that more operators will adopt this type of installation.



In many eastern fields small tanks are used at each well. From these the water is drawn off before the oil is pumped from the well to the lease storage tanks

Many of the older central power installations in the Bradford field consist of air compressors. From these, 2-inch pipes carry the compressed air to the wells which are pumped by pneumatic cylinders with the pistons connected to the sucker rods. Another type of central power is the electric generating station on Olean Petroleum Co.'s 5,247-acre Kanesholm lease. Here the power generated is conducted by electric lines to over 300 wells, which are pumped by small individual electric motors used to operate the pumping jacks manufactured in the company shops.



Thirty-foot bandwheel with 30-inch face and 28-inch endless belt installed at an angle to conform with the slope of the hillside upon which it is located

All of the oil wells are pumped by electrical equipment manufactured (with the exception of electric motors) in the fully equipped lease shop. The cost of pumping is estimated to be 0.07 cent per barrel of fluid taken from the oil vent well. The electricity, while produced at the lease power plant, could be purchased to give a similar cost figure, as indicated by checking this item with that of Rock City (Bradford field) electrical pumping. Referring to the lease shop and power plant in order: The shop produces the electrically operated pumping jacks at the rate of two a week. Purchased on the retail market the pumping jacks cost in the neighborhood of $400, and the neat rig an additional $50. The electricity used on the lease is generated by two 187 KVA dynamos turned by 180-horsepower Clark gas engines. Operation is on a 24-hour per day schedule.

The sand from which oil is produced on the Olean lease is generally identified, for convenience it is stated, with the Bradford Third sand. It is pointed out that the discontinuity of the lower Chemung sands has resulted in naming as Bradford sand numerous formations which could be related in superficial appearance only, and which chemical analysis has revealed to be entirely different from the great waterflood sand of northern McKean County. The Kanesholm sand is believed by some authorities to be somewhat tighter than the Bradford Third sand. Between the Kanesholm and Bradford there is a wide area where there has never been any commercial production of oil. In this intervening gap the paying sand is either entirely absent, or pinched out to bare sheets.

Rod lines in this field use very few of the common types of hold-ups or hold-downs, and those used are of the pendulum type, and never the roller type. The rod lines usually lie quite close to the ground, and are often supported by a tripod from which a short rod hangs and is connected to the turtle-back clamp. In this case a special turtle-back clamp is used which has a ring through which the rod fits. The advantage of this method of rod line support is that there is much less friction than when the rod is held up by a dowl head.

Common type of rod line support used in the Pennsylvania fields. The rod hanging from the tripod hooks into a ring on the turtle-back clamp and is free to swing with each stroke of the rod

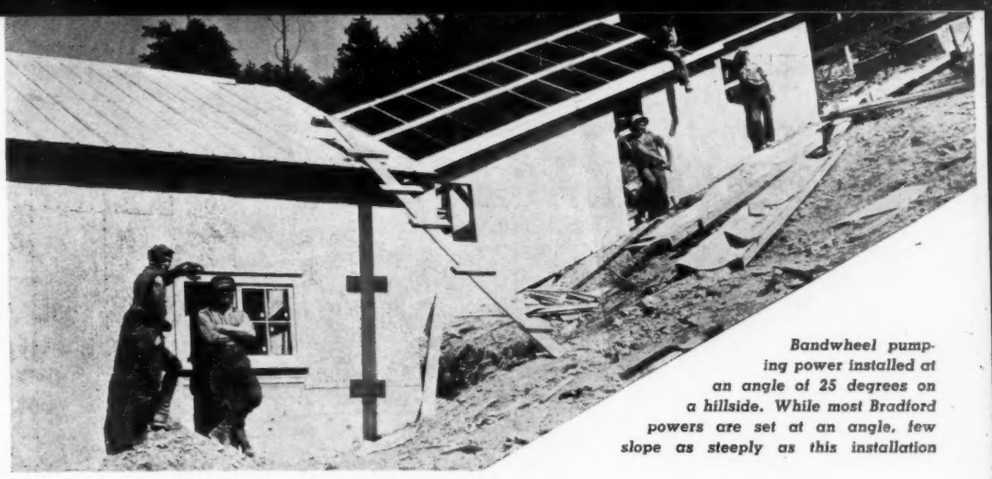
Another common method of reducing rod line friction, which seems to be especially popular on new installations, is that of using a wooden A-frame to support the rod line. Each rod line clamp is fastened to the top of one of these. The bases of the A-frames are bolted to posts driven into the ground so that they are free to swing. This method is advantageous for crossing the crest of hills with rod lines.

Many types of pumping jacks are in use, varying all the way from homemade wooden jacks to heavy steel jacks with a load capacity of 12,000 pounds. The trend is evidently toward straight-lift jacks. In inaccessible places the jacks are

in Bradford

Late Types

By T. P. SANDERS

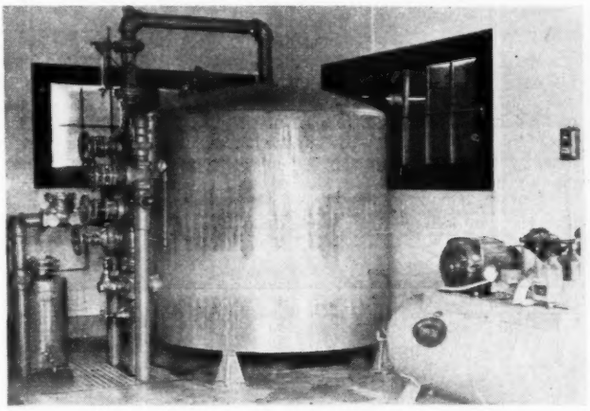


Bandwheel pumping power installed at an angle of 25 degrees on a hillside. While most Bradford powers are set at an angle, few slope as steeply as this installation

often driven by individual electric motors, instead of rod lines from powers.

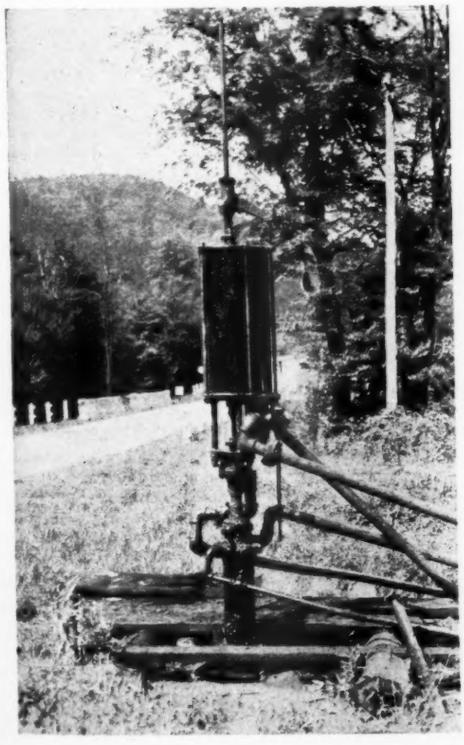
A very important consideration in any water-flooding operation is the pump to be used to force the water into the sand. Most Bradford operators use vertical triplex power pumps, the three cylinders being 3½ by 8 inches or larger. These will pump about 65 gallons per minute under a pressure of 2,000 pounds or more. They are outside packed, which reduces shut-down time.

The Kanesholm Oil Corp. has just completed an installation near Kane which introduces the mud-pump principle, as used on rotary rigs, to the water-flooding field. The pump selected was a horizontal duplex double-acting plunger pump with 3-inch by 12-inch cylinders. This pump weighs 15,000 pounds, being larger than other water pumps in use. It is driven by a 15-inch by 15-inch single cylinder gas engine, and will deliver 70 gallons per minute under a differential pressure of 1,260 pounds. It is expected that this type of pump will prove satisfactory, as it has on the rotary rig.



Filter plant used for treating water on a small water-flooding lease. The small tank at the left contains alum which coagulates silt in the water

The Forest Oil Co. is using a single-stage vertical centrifugal pump on a lease at Wolf Run which is driven by a 75-horsepower electric motor. A closed system is used in this case with no water treating. The water supply is pumped from a well by a turbine pump. The centrifugal pump starts automatically when the pressure on its intake reaches 75 pounds. It ordinarily operates with an intake pressure of 250 pounds and discharges the water directly to the wells under a pressure of 600 pounds. If the turbine pump fails, the centrifugal pump automatically shuts itself down. These pumps are used on leases where very high pressures are not necessary.



Pneumatic head used to pump wells in the Bradford field. It operates on compressed air

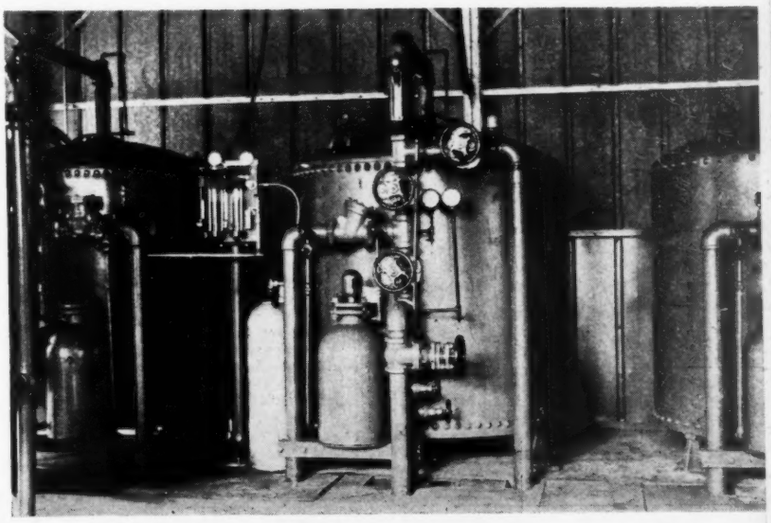
Outstanding among the centrifugal pumps used in water-flooding is the horizontal electric-motor-driven centrifugal pump recently installed by the Olean Petroleum Co. on their Kanesholm lease. This pump is capable of discharging 250 gallons of water per minute against a pressure of 750 pounds. It is used part time to carry the same load as a triplex pump and a vertical centrifugal pump, and could be considered as standby equipment. The vertical pump handles 120 gallons per minute.

The variance in the type of pumps used for forcing water into the oil sand is partly due to the difference in pressure at the well heads. This difference is due partly to permeability and partly to preference of operators. On the Smith farm lease of the South Penn Oil Co., no pressure pump is used. A water tank on a hill adds to the pressure exerted by the 1,800-foot columns of water in the wells. However, the volumes of water taken each day are quite small.

During the past year there has been a trend toward the electrification of leases. Combination compressor and electrical generating plants are being installed in many of the Pennsylvania fields. In these installations the diesel engines furnish the power for both operations. Electric power thus generated is used for pumping powers and electric motors replace all gas engines, thereby conserving all the available gas for lease repressuring purposes. At start of many of the repressuring operations, all gas is used for injection purposes and the engine is operated as a diesel using fuel oil. Observations have shown that even though a lease produces but little gas, under a repressuring program, gas production will materially increase. After sufficient increase in gas production has been obtained, the engine is converted to use gas. This practice has been found to be satisfactory and also conserves the gas.

A-frame used as a rod line support. The frame pivots on the long bolt through its base

Part of filter plant on Olean Petroleum Co. Kanesholm lease showing chlorinators which measure chlorine into the water in order to stop the growth of organic matter between the filters and the bottoms of the input wells



South Burbank Reservoir Reacting to Maintenance of Subsurface Pressures

By R. J. SULLIVAN
Carter Oil Co., Tulsa

Application of a reservoir pressure maintenance program to a communitized territory embracing the major and most prolific portion of the South Burbank pool, Osage County, Oklahoma, has now been in operation for more than a year. In proceeding under such a type of development not only have expected improvements in convenience and economy of operation been demonstrated, but some definite form is being taken by both the benefits and the special problems which could originally be anticipated in merely a general way.

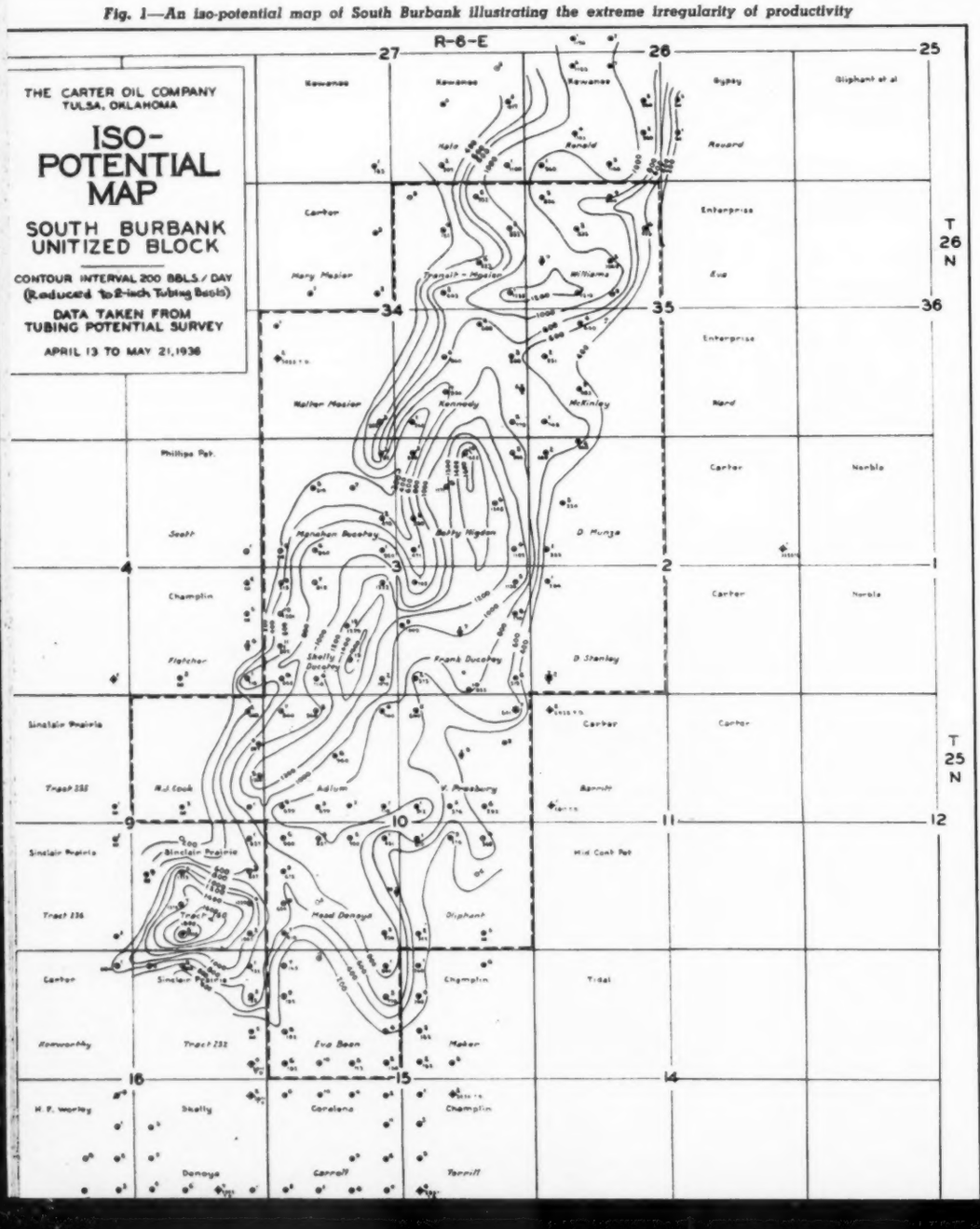
Probably no more formidable obstacle to this sort of joint undertaking exists than its successful organization and satisfactory administration, and it is in this sense first that the South Burbank unit block can lay claim to achievement. Because of the intangibility of the fundamental factors involved, the pool being at the time not half developed, only the exercise of singular goodwill and unselfishness made possible the mathematical assignment of participating interests. By turning to studies of the older North Burbank pool, where conditions mechanically and geologically most similar to those of South Burbank make adaptation sufficiently valid, an acceptable division of reserve shares was contrived. North Burbank having reached a decline stage permitting reasonable determination of recovery factors, the consistent exponential relationship discovered to prevail between initial production figures and oil recovery was applied to South Burbank properties. Evaluation of these lands from a reserve standpoint was then accomplished on a contoured areal productivity basis in working out a scale of partnership equities. Altogether, 16 contributions were made to a June, 1935, consolidation by the following lease owners:

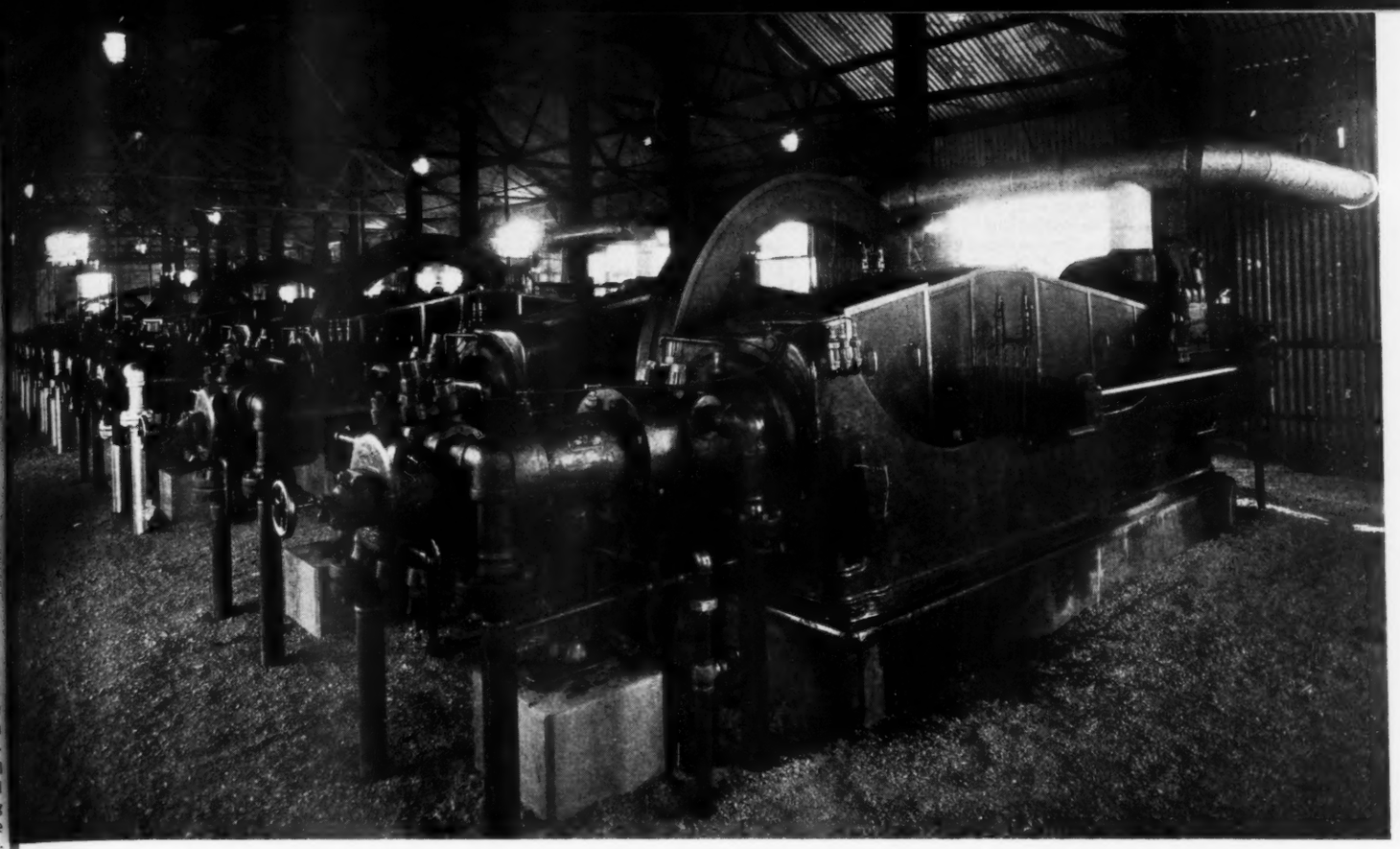
Albec Oil Co., Bay Oil Corp., Bridgeport Machine Co., Buffalo Oil Co., Carter Oil Co., Empire Oil & Refining Co., Enterprise Transit Co., Gulf Oil Co., Indian Territory Illuminating Oil Co., J. E. Mabee, Manahan Oil Co., Midco Oil Co., Norbla Oil Co., Phillips Petroleum Co., Skelly Oil Co., and H. P. Taubman, Inc. Carter Oil Co. is the designated operator, all major questions being referred to a governing Advisory Board comprised of representatives from each partner. An Engineering Sub-Committee makes its recommendations upon matters of a predominantly technical nature.

Structurally, the South Burbank pool is typical of other known Burbank sand bodies in Oklahoma and Kansas which occur in definite trends consisting of lenses interspersed with shale gaps. Thus the North Burbank pool, an eastern extension called the "Stanley Strip," the South Burbank pool, and the Fairfax pool lie—in the order given—from north to south in a system of lenticular oil-bearing reservoirs. Recent investigation prompts the hypothesis that these early Pennsylvanian deposits were of offshore bar origin along the western beach of a Cherokee sea. Grading into shale on both its east and west sides, the South Burbank sand body is further limited on the western edge by water. Its pronounced lenticular features do not lend themselves to pressure maintenance so ideally as the dome type of trap. The same may be said of the pool's duplication of North Burbank in an irregularity of porosity and permeability for which it has been notorious. On the other hand, the Burbank sand production's long life, shallow depth, and response to repressuring in other localities argue the amenability of South Burbank to a pressure maintenance program.

In brief, the plan is to return all surplus gas to the reservoir throughout the flush stage of its life and by thus retarding the rate of pressure decline to lift the bulk of the recoverable oil by

Fig. 1—An iso-potential map of South Burbank illustrating the extreme irregularity of productivity





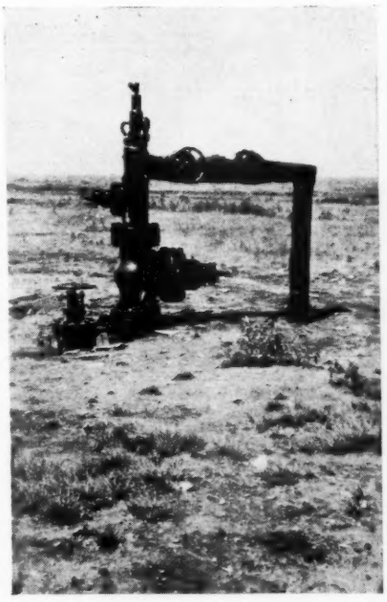
Engine room interior at the Presbury recompression station delivering high-pressure gas to the South Burbank community block's input wells

natural flow, at the same time securing, through preservation of the oil's reservoir fluidity, higher ultimate recovery.

The South Burbank pool itself extends over an area 5 miles long by 1½ miles wide in Townships 25 and 26n, range 6e. Including 2,220 of the pool's probable 3,500 productive acres, the communitized territory embraces 17 complete quarter sections. At the end of August, 1936, there were 179 completed wells numbered in the pool, the block owning 114 of them. Depending on porous zone thickness and cementation, their initial production varies from 10 bbls. to 5,800 bbls. per day, from an average depth of 2,850 feet. The Burbank interval is approximately 80 feet thick, of which usually 50 or 60 feet are in the pay formation. Cores show interbeddings of shale and shaly, silty standstone, a mean porosity of 17 per cent, and wide variance in permeability, the average probably being about 50 millidarys. There is scant evidence to support any agreement between well productivity and contours drawn on top of the Burbank oil or gas bearing pay formation. A comparison of the iso-potential map in Figure 1 with a reservoir map discloses even contradiction in the cases of certain highs; fair parallelism at the north end of the pool in the southeast quarter of section 27-26-6 and down toward the center of the unit block finally vanishes altogether and is supplanted by reversal in the southern extremities of the pool. Principal highs lie along almost a straight southwest and northeast line, with average production decreasing in the latter direction. Correspondence between sand maps and initial gas production, which ranges from merely a few thousand feet per day to 15,000,000 feet at the time of a well's completion, is notably closer, for gas ordinarily collects in the higher sections of the sand body.

This fact encourages the theory, borne out by experience with other pressure maintenance projects both in this country and abroad, that results are more desirable when gas is restored to the reservoir's upper portion. A cleaning action is thus exerted by gas cap generation in an invaded area through which the oil is driven down dip toward producing wells.

From Figure 1 it may be seen that the unit block's seven input wells are located along the eastern side of the pool. In this they are situated on what may be likened to the structural crest of a westward-dipping monocline, or in other words conform as nearly as possible under local circumstances to the ideal pattern.



Surface production equipment on a community block well. Note heavy flanged manifold — a precaution again high well-head pressures

Casinghead assembly on one of the input wells through which gas is returned to the reservoir. The metering equipment is not shown

The seven units at the block's Presbury recompression station delivering high-pressure gas to the field include eight 5½-inch cylinders and six 6¼-inch 2,000-pound steel cylinders driven by Cooper-Bessemer Type 10 and Type 12 engines equipped with 17-inch power ends and fuel economizers. At 200 r.p.m. the latter are rated at 230 horsepower; with a station total rating of 1,565 horsepower the single-stage throughput capacity to 1,100 pounds on the discharge is 16,500,000 feet per day. Residue gas at 260 pounds per square inch is furnished to the station through 6-inch and 8-inch welded lines from the Skelly Oil Co.'s two Fairfax gasoline plants which hold processing rights on the block's entire casinghead sales. Their combined capacity is placed at 22,000,000 feet daily for 27 machines. Delivery to input wells is made through 2½ miles of 4½-inch O.D. seamless welded distributing header lying along the northeast-southwest axis of the unit with 2-inch and 3-inch laterals leading to individual wells. All material in the discharge system is of 1,500-pound minimum working pressure construction. The input wells themselves are fitted with the orthodox water and oil strings, both cemented. In view of the aim of gas return, the function of the Presbury station and its distributing lines is now that of displacement of pumping equipment which would be later required under normal depletion. Recompression equipment, the operation of which covers roughly 20 per cent of the unit's lifting cost at the present time, may legitimately be regarded as chargeable to future recovery, rather than to current expenses.

From 12 to 13 million feet daily, or more than 85 per cent of the block's own casinghead runs, are being supplied to input wells. Through a special arrangement with the utilities company owning the rights to gas produced in excess of lease operating demands, 2½ million feet per day

of residue not utilized by other producers in the area are included in the unit's return volume. A further concession obtained by the same contract abrogates the usual Osage prohibition on transporting gas from one tract to another and permits distribution of gas so that injection may be pursued toward the unobstructed interest of pressure maintenance.

Computations based on laboratory studies of bottom-hole fluid samples indicate that approximately 65 per cent of volume of withdrawal represents the degree of reservoir replacement being accomplished. By reference to the North Burbank pool's final recovery and by other more involved methods of ultimate yield from unitized properties is, for the time being, at 45 million barrels. This supposes a modernization factor of about 20 per cent benefit largely due to enforcement of proration from the start and about 40 per cent increased recovery as a result of sustained pressure—both reverting to prolonged flowing life and to preserved reservoir oil fluidity. Naturally the added recovery which can be expected from pressure maintenance is most difficult to reckon, particularly where the production has always been subject to restriction and where the work has been begun in its early life. Nevertheless, it is not unreasonable to assume that fully as great an increase may be secured as under repressuring or gas drive. There is even more uncertainty attached to early forecasts of the extent to which reservoir energy will be upheld, but the growing information accumulated to date prompts a first opinion that by the time the static subsurface pressure, at the present rate of replenishment, has declined to 270 pounds per square inch the reserves now thought to be recoverable will have been withdrawn from the sand. At such a point the greater portion by far should have been lifted by flowing.

From an original value of 1,050 pounds the shut-in pressure drop, prior to creation of the unit on the same properties, is considered to have taken place at a consumption of at least 40 pounds per million barrels of production. In withdrawing 4,200,000 bbls. of oil and introducing 2,340,000,000 feet of gas into the reservoir since injection was begun at 910 pounds, the average decline to the present conservative average of 800 pounds has been reduced to 27 pounds per million. Inasmuch as there is some tendency for this average to be accelerated, it is thought that the maximum arrest of decline has already been traversed. The over-all pressure of the entire pool is 752 pounds. Characteristic behavior of an oil well stimulated by exposure to a gas cap instilled in the vicinity is displayed in the following specimen test record:

STATIC SUBSURFACE PRESSURE RECORD OF A TYPICALLY STIMULATED WELL (1,750 FEET SUBSEA) COMMUNITY 42, SOUTH BURBANK

Datum — Subsurface test Date	P.S.I.	Bbls. production since — Preceding test	1st test	Pressure change since — Preceding test	1st test	Change per 1,000 since — Preceding test	1st test	Estimated accum. gross prod. bbls.
9-20-34	1,030	First test						31,996
10-22-34	1,015	5,322	5,322	—15	— 15	—2.82	—2.82	37,318
4- 5-35	972	28,376	33,698	—43	— 58	—1.52	—1.72	65,694
4-22-35	960	3,542	37,240	—12	— 70	—3.39	—1.88	69,236
7- 2-35	935	12,767	50,007	—25	— 95	—1.96	—1.90	82,003
9- 6-35	895	8,788	58,795	—40	—135	—4.54	—2.29	90,791
10-27-35	916	5,293	64,088	+21	—114	+4.20	—1.78	96,084
1-14-36	910	7,434	71,522	— 6	—120	—0.81	—1.67	103,518
4-25-36	904	10,856	82,408	— 6	—126	—0.55	—1.53	114,374

Those indexes which are of greatest significance in marking change from normal decline are plotted in Figure 2. Injection at a point 1,000 feet distant from this well was begun on September 8, 1935, so that by the end of April, 1936, nearly 475,000,000 feet of gas had been returned through it to the sand body. Note that unmistakable interruption in the average rate of dissipation occurred during October and that the well has finally arrived at a stage of renewed decline under effect of stimulation. Depending on their proximity, this sort of performance is usually exhibited by most wells surrounding input wells, the phenomenon becoming unappreciable with greater distance of removal from the injection point. Apparently the course taken by the weighted average pressure of the entire block, is, logically enough, comparable to that of certain individual wells in passing through a phase of retardation before entering upon secondary decline.

The importance of bottom-hole pressure information to execution of a maintenance plan is exceeded only by that of accurate investigation of gas-oil ratio fluctuation. During December, 1935, when deliveries of high-pressure residue to the sand had reached 500,000,000 feet the block's over-all ratio began steadily to mount upward. In the 9 months subsequent to this turn it has risen from 960 to 1,334 feet per barrel, a share of the inclination being ascribable to ordinary producing conditions. The direction of input gas encroachment, as might be expected, is generally updip. As a rule, once an effected oil well shows signs of benefit in the way of bottom-hole pressure gain, a gradual gas factor increase may next be looked for. Although there is some tentative evidence of promise, no conclusions have yet been formed as to whether or not a given well's artificially elevated gas-oil ratio may come to a maximum beyond which further advance is negligible. Thus far no channeling or by-passing of input gas by outright invasion of a producing well has been detected. In taking production from oil wells the practice is to flow them at the optimum rate indicated by gas factor characteristic tests, and avoiding by means of long period intermitting, so to speak, any lengthy localization of draw-down conducive to channeling. Uncommon latitude in this regard has been made possible through a blanket lease grant by the United States Department of the Interior authorizing complete

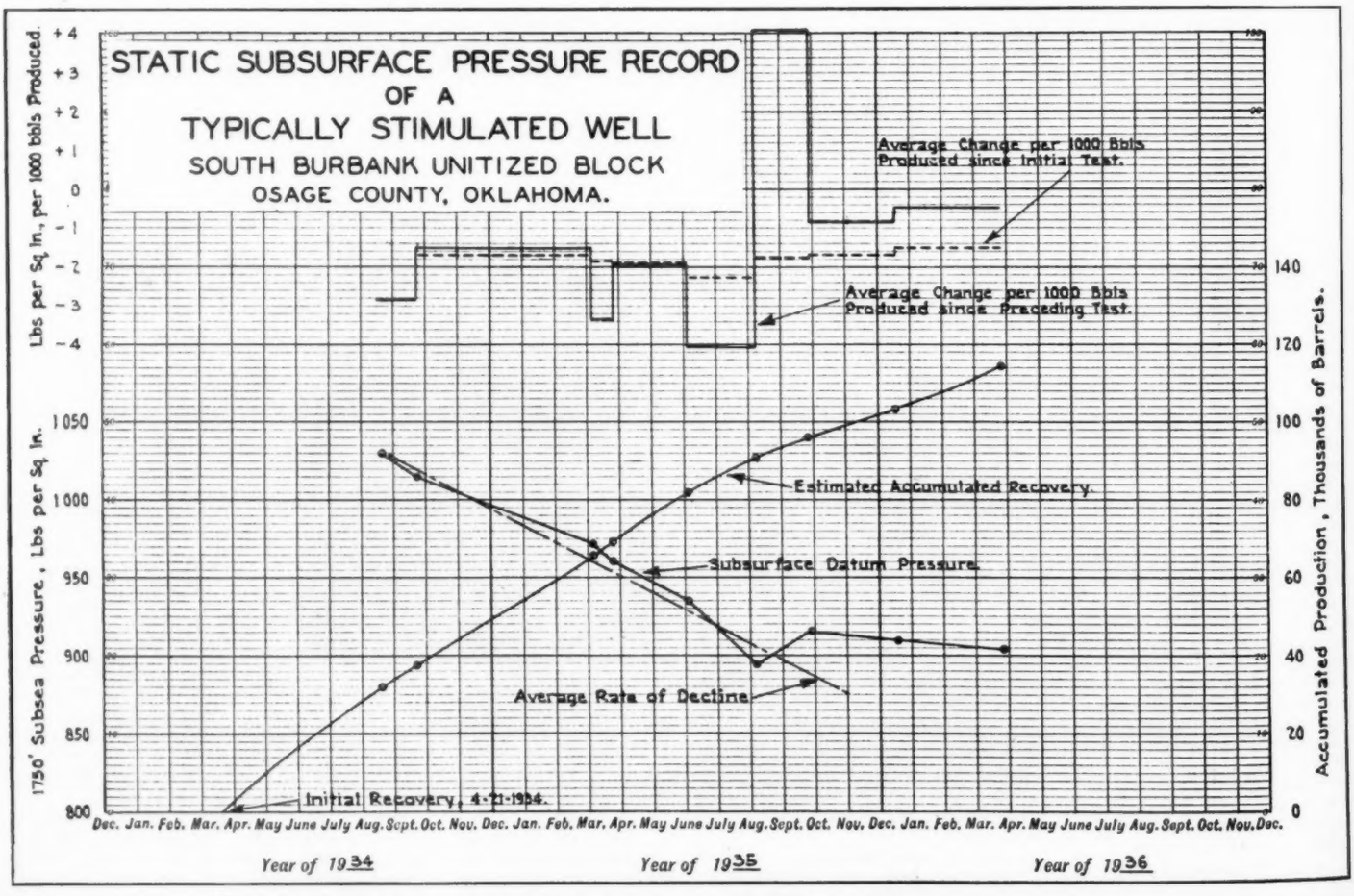

STATIC SUBSURFACE PRESSURE RECORD
OF A
TYPICALLY STIMULATED WELL
SOUTH BURBANK UNITIZED BLOCK
OSAGE COUNTY, OKLAHOMA.
Average Change per 1000 Bbls Produced since Initial Test.
Average Change per 1000 Bbls Produced since Preceding Test.
Estimated Accumulated Recovery.
Subsurface Datum Pressure.
Average Rate of Decline
Initial Recovery, 4-21-1934.
Lbs per Sq. In., per 1000 bbls Produced.
1750' Subsea Pressure, Lbs per Sq. In.
Accumulated Production, Thousands of Barrels.
Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
Year of 1934
Year of 1935
Year of 1936

Fig. 2—Records of this sort are essential to observa tion and control of progressive pressure maintenance

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PLANK NO. 1 — **A Concentrated Solvenized Treatment which—in 15 minutes—dissolves carbon binder, frees stuck valves and piston rings, and restores full, equalized compression.**

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Here is a platform that motorists by the thousands are gladly endorsing and that only Pure Oil distributors can stand on. If you would like to solve your sales problems with Super-Solvenized products . . . if you would like to climb on the band wagon, ask your nearest Pure Oil sales office for details.

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SALES OFFICES:
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New York, New York
Philadelphia, Pennsylvania
Pittsburgh, Pennsylvania
Trenton, New Jersey
Columbus, Ohio
Norfolk, Virginia
Atlanta, Georgia
Minneapolis, Minnesota
Duluth, Minnesota
Madison, Wisconsin
Des Moines, Iowa
Tulsa, Oklahoma
Beaumont, Texas

Super-Solvenized Purol-Pep — Super-Solvenized Woco-Pep

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PRODUCERS, REFINERS, MARKETERS OF A COMPLETE LINE OF PETROLEUM PRODUCTS

THE PURE OIL COMPANY ~ U. S. A.

coalescence of the 17 one-quarter sections comprising the unit into a single leasehold abolishing all former internal property line divisions from the standpoints of allowable and royalty.

In June, 1935, a voluntary proration system distributing pool production on a per-well basis was abandoned by the nine operators at South Burbank in favor of one designed to curtail well spacing and to protect the pressure maintenance type of development from unfair offset drainage. It provides for allocation on a 40-acre tract basis, an original or reference status having been given to each 40 on its establishment of a 6-hour open flow tubing potential test, maximum permissible tubing size being 2½ inches. An average potential of all wells on a 40-acre piece was multiplied by two to calculate the tract rating. The minimum well class has been fixed at 25 bbls. daily. These fundamental potentials are then modified every 90 days by applying factors expressing the relationship of each 40's weighted average datum plane pressure to the pool's static average as revealed by surveys conducted in the presence of witnesses. An isobaric contour map resembling the sort used by a committee of operators' representatives in computing planimetered pressure averages and adjustment factors governing each new allocation period is shown in Figure 3. Obviously this method of proration functions to promote lessening of horizontal pressure gradients and to offer some assurance to a party going to the expense of maintaining reservoir energy that has augmented recoverable oil may be taken from his own wells. The plan's theory includes no pretention that a pressure-modified "potential" is an empirical gauge of a well's actual ability to produce, no more than it acknowledges that a potential test constitutes a direct measure of underground reserves. Almost all the South Burbank companies holding property outside the community block have already taken steps to install a sand stimulation program similar to that of the latter interests.

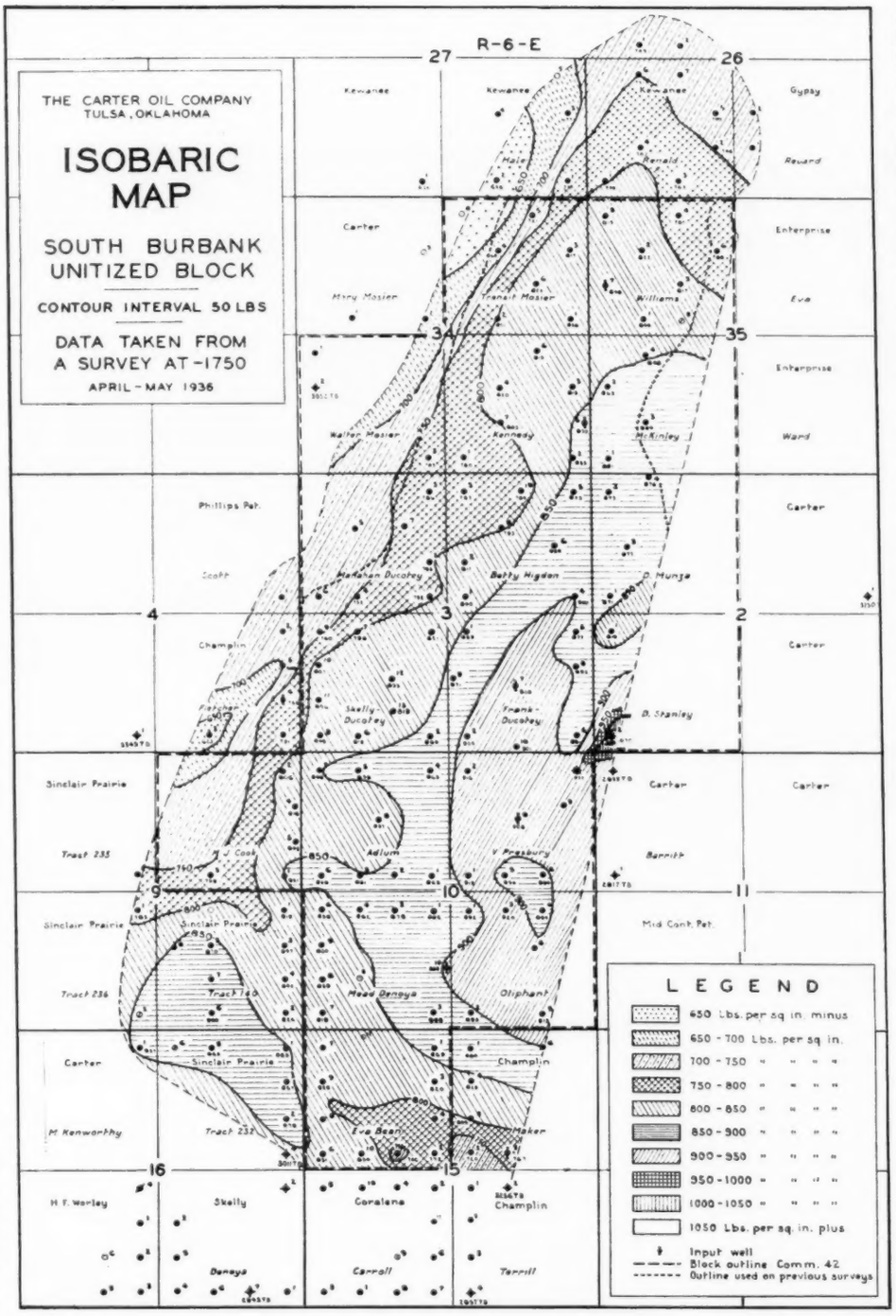

Fig. 3—Subsurface pressure surveys are conducted periodically at South Burbank to furnish data for production allocation and project operation. Note the gradation in pressure away from input wells

While an increase in ultimate recovery and extension of flowing life are the foremost advantages sought by the South Burbank project, it relies strongly on their corollary benefits as to consequence from unitization, from pressure maintenance, or from a combination of both. Results in the shape of reduced material inventories, minimized overhead and labor costs, avoidance of duplication, standardization of equipment, and the like are direct outcomes of consolidation. Recently, for example, the community block's crude oil gathering system has been centralized to include three master tank batteries and five auxiliaries instead of 22 individual tank groups, and to release from service thirty-odd tanks for disposal elsewhere. Impressive economies in development investment and costs are alone sufficient to justify the expenditures connected with handling input gas. It is felt that the drilling of 90 wells is being eliminated without sacrifice of drainage. At $21,000 per well the saving amounts to $1,890,000. If a 10-cent over-all differential can be averaged between lifting costs under unitized operation and those to be predicted in this section under customary development methods, a sum of $4,500,000 will be its gross money value. Additional recovery of oil may be placed over and above such savings.

Since its initiation the block drilling program has been consistently aggressive, holding an average level of about five simultaneous active locations. Drilling is performed entirely by cable tools, chiefly because, in the absence of a competitive situation, these seems to be scant vindication for the extra expense involved in putting down rotary holes. In those cases where it has been judged necessary, the practice has come into use of cementing a 7-inch oil string through the upper portion of the Burbank interval where a gas cap already exists naturally or where it may readily be formed by encroaching gas. The procedure employed is to penetrate the pay to a depth at which casing is to be set and to kill the well with a 4 to 5 per cent aquagel solution so that the 7-inch pipe may be run and cemented without danger of either a blowout or of impregnating the immediate formation with water.

Among 114 wells embraced by the community block are eight producing on sucker-rod pump from a tight sand region along the west side of the pool, whence they contribute virtually the whole of a small salt water volume in quantities decreasing from the south edge northward. Nearly all are served by reduction gear units, driven by 7½-horsepower squirrel-cage motors at a first investment cost of $3,500, inclusive of all material except well casing.

South Burbank's allowable is currently 14,330 bbls. daily, 9,450 bbls., or 67 per cent, going to the block. In every direction but north, where exploration still being carried on encounters consistently lower virgin pressures the pool's flush zone limits have been fairly closely defined. Having already satisfied offset obligations, future development in the block will continue to be of an internal character. As contemplated at this stage of advancement, eight more wells, or a total of 122, affording an average density of one to 18 acres, will be required for proper drainage. Rather than on any set grid system, locations are spotted through regard for areal productivity and the sand conditions which complicate the question. Close spacing evolved shortly after the pool's discovery has furnished some unnecessary wells, and there is plainly no escape from drilling some others. Again, subsequent development may dictate advisability, upon definite establishment of their existence, of applying gas drive radially to "islands" unduly retentive of oil. As exploitation approaches a settled stage, special problems coming to the fore will exert greater demands of attention. There is every indication today that natural flow will be long protracted. Ascertainment of input gas movement and disposition underground, treatment of gas-oil ratios, control of recycling, and associated matters claim comprehensive, detailed reservoir study which will identify the South Burbank block's importance as a project aside from its singularity as an example of absolute, irrevocable unitization.

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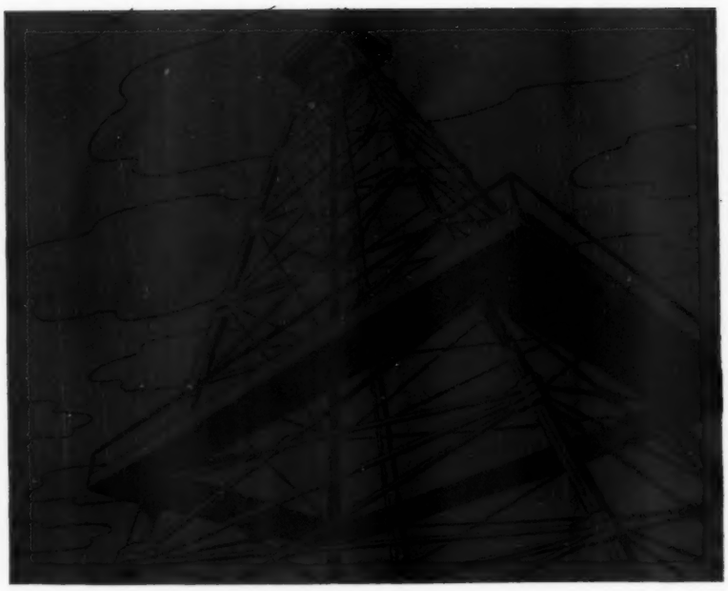

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In every producing field . . . on the toughest jobs . . . in the deepest holes . . . you'll find drilling bits of Agathon Alloy Steel. Tough, long wearing, designed especially for oil field service, drilling bits of Agathon Alloy Steel help to reduce drilling costs.

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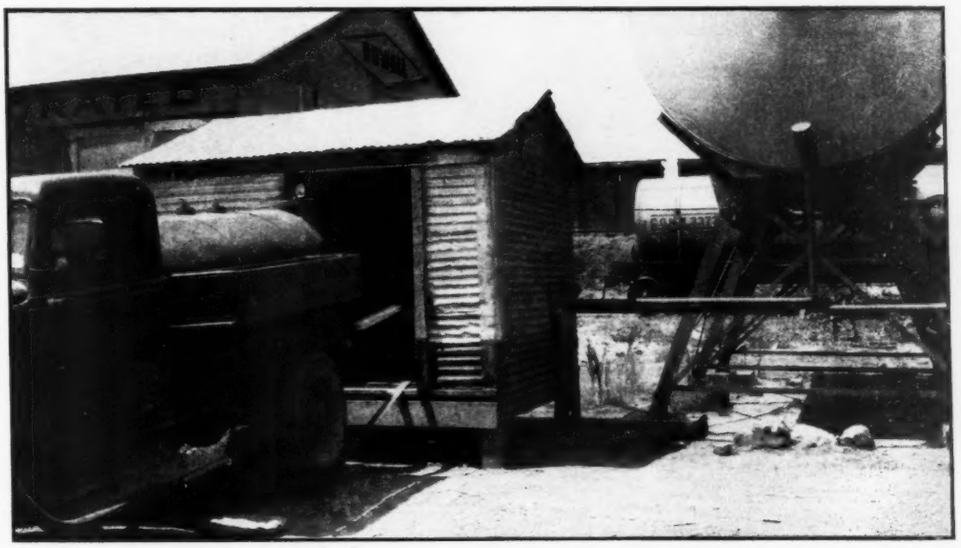
OPERATING IDEAS

Truck Supplies Power

When the little gasoline engine had to be repaired before it could be used again to pump oil out of the cars to the storage tanks at an Oklahoma bulk plant, it would have meant suspending operation of the plant temporarily had it not been for the ingenuity of the driver of a truck. He backed his truck up to the engine house, jacked up a rear wheel and located a belt. He slipped the belt over the pulley wheel on the pump and the alignment of the truck was satisfactory to permit the tire to drive the pump. The truck engine operated at a rate equal to driving the truck at about 10 miles per hour. The diameter of the pulley wheel and that of the tire determines the optimum speed, but this installation shows that a satisfactory ratio lies within reasonable limits.

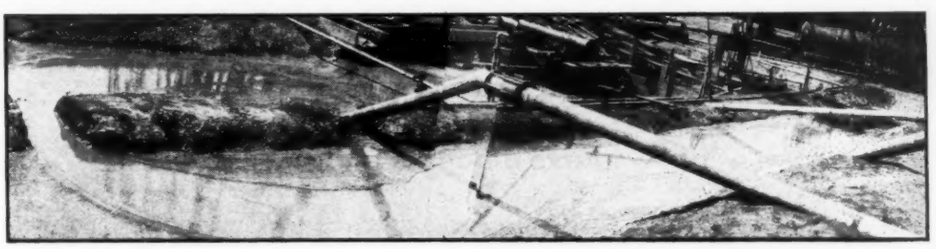


Condenser for Lease Gas

An independent operator has installed a coil of 2-inch pipe on top of a circulating tank. Gas from the wells passes through the coil while water is sprinkled over it. The moisture condenses and settles in a drip tank.

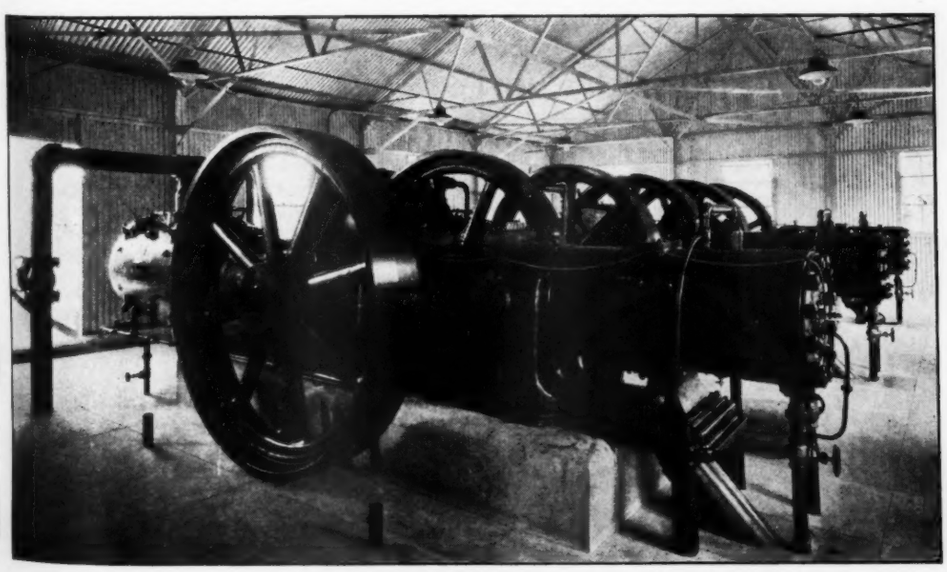
Small Mud Pit Features Maximum Mud Travel

Drilling in the Fitts pool has usually been accompanied by problems concerning the drilling mud since it is often gas cut. To remove the gas from the mud, it is helpful to have the mud travel a long course through the pits. The accompanying photograph shows two long narrow pits side by side connected together at each end. The center section of the



pit nearest the rig is walled off to provide a place to catch the cuttings discharged from the vibrating screen. The mud goes through the screen and enters the first mud pit next to the cuttings pit. It then flows around through the second pit, a dividing wall being used to separate the two pits, and back into the first pit where it is picked up by the slush pumps.

Obsolete Engines Converted to Serviceable Equipment by Cutting in Two and Remodeling



Two old type, 165-horsepower Bessemer gas engines have been recently cut in two and placed in heavy duty service as 80-horsepower engines in Arkansas Fuel Oil Company's natural gasoline plant at Rodessa, La. The engines were originally installed in the first compressor station west of the Mississippi River in 1908, but were completely obsolete for modern use. These 165-horsepower engines were cut in two where the compressor connects onto the main frame. The crank shaft was turned around to reverse the motion of the engine. New 19-inch Cooper cylinders were installed with 17-inch liners and modern air starting-valves were added. New governors and magnetos were placed on the engines instead of the old make-and-break type ignition and the mixing valves were changed from the poppet type valve to the more modern involute spring and disc type.

Pipe Line Reconditioning Becoming Problem of Major Importance

By W. MIKE MURPHY
West Air Reduction Sales Co.

Until recently, the major problems of the pipe line industry, were those of design and construction. The operation of new lines presented no maintenance problems other than those resulting from improper original design. The increased age of lines has brought the pipe line industry to the development of standard maintenance practices and the reconditioning of lines while in service. In this phase of the pipe line business, welding holds an important position.

During the past year, a very complete survey was made of all the oil and gas pipe lines in this country by the Interstate Commerce Commission. It has been estimated that at least 5 per cent of all the trunk lines will require reconditioning each year. Unlike the peak and depression periods of construction, the demand for reconditioning should be regular and, within season, continuous. The welding materials consumed in the reconditioning of lines is very nearly equal to that consumption in new construction, which means that, in a few years, the regular smooth demand for welding materials for this purpose will be equal to the market for these materials used in construction during an average year.

Very efficient methods are now in use for the reconditioning of lines in operation. The lines are uncovered with specially equipped ditching machines and a small amount of hand labor, raised and supported by skids over the open ditch where reconditioning operations are completed and the pipe is lowered into its original position in the ditch.

After the line is skidded up or in a supported position over the open ditch, the first operation is cleaning. This operation is divided in two parts; the first being to remove dirt and coating, immediately after the pipe is raised, and the second to remove all traces of rust and dirt following the welding operation. These operations leave the pipe with a bright surface for the painting and doping operations. Machines have been developed which are capable of doing a much better job of cleaning than would be possible by hand. One of the most popular types of cleaning machines is that manufactured by W.K.M. Co. and distributed by Crutcher-Rolfs-Cummings, Inc., of Houston, Tex. This machine powered with an automobile-type gasoline motor propels itself on the pipe and rotates a cleaning head around the pipe. In the first part of the cleaning operation, the head is equipped with hard-faced knives for removal of dirt, wrappings, and paint. In the final part of the cleaning operation, the head is equipped with sharp-toothed wheels similar to the cutters used in milling machines. These wheels, rotating around the pipe at high velocity, chip and scrape the last traces of rust and stain from the pipe.

Following the first part of the cleaning operation the pipe is inspected and the depth of corroded spots and pits checked with a pit gauge. Deep pits are marked for spot welding, corroded spots for patching, long corroded sections for half-soling, and in bad cases whole joints are marked for sleeving or removal. In screw lines, all couplings are considered potential leaks and both ends are welded. Leaky couplings and all tie-in flanges in screw lines are sleeved.

The organization of the welding crew on reconditioning is similar to that on construction, welders leap-frogging as they complete the sections to which they are assigned. Where half-soling and sleeving is required this is done by one or more machines working behind like tie-in welders on construction.

Light coated electrodes are used with reversed polarity, half the circumferential welding and most of the spot welding being overhead on the bottom half of the pipe. To prevent burning through the walls of working lines, smaller electrodes are used than in construction, the most popular being five-thirty-seconds and three-sixteenths inch. The speed of welding will be comparable to the speed of overhead welding with the same size electrodes on construction.

It is interesting to note that the welder has almost entirely displaced the blacksmith on pipe line work. Ditching machine buckets, rooters, and side cutters are no longer reshaped in the forge but are built up in place on the machine with welding torches.

Following the welding operations, the pipe receives its final cleaning followed by painting and wrapping or application of hot surface coatings. Machines are now in use which do an excellent job of painting, thus doing away with one of the most uncomfortable jobs on pipe line work. Doping is quickly followed by lowering and back-filling.

Because of the hazard involved gas lines are usually taken out of service or worked under lowered pressures during reconditioning.

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Announces New Motor Fuel

CHICAGO, Sept. 26. — Space in newspapers having a combined circulation of more than 12,500,000 will be used by Standard Oil Co. (Indiana) in its fall campaign to promote the interests of some 23,000 dealers who are operating

service stations and garages in 13 north central states.

A feature of the campaign will be the announcement of a forward step in the company's work to improve its gasoline. Ads will tell how the starting time of an engine has been reduced to one second or less, even in bitter winter weather.

The company will also announce the winners of the road test it conducted through the summer months, with participation by more than a million motorists acting as "test car drivers." It is estimated that the participants covered more than 20,000,000 miles to ascertain how driving costs can be reduced. Their findings are not likely to be known for several months, however, owing to the amount of work involved in tabulating and summarizing the thousands of reports turned in.

DISPLACEMENT TABLES FOR RECIPROCATING PUMPS

RECIPROCATING PUMPS (PLUNGER TYPE) DOUBLE ACTING DUPLEX

LENGTH OF STROKE IN INCHES

Plunger diameter (inches)	12 INCHES		18 INCHES		24 INCHES	
	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours
3.00	2.0979	50.3577	.....	.....	.....	.....
3.25	2.4615	59.0864	.....	.....	.....	.....
3.50	2.8555	68.5424	.....	.....	.....	.....
3.75	3.2774	78.6699	.....	.....	.....	.....
4.00	3.7296	89.5248	5.5952	134.2884	7.4608	179.0480
4.25	4.2098	101.0511	6.3156	151.5758	8.4214	202.1004
4.50	4.7204	113.3048	7.0814	169.9562	9.4426	226.6076
4.75	5.2587	126.2300	7.8892	189.3428	10.5197	252.4677
5.00	5.8276	139.8825	8.7425	209.8225	11.6575	279.7625
5.25	.....	.....	9.6377	231.3083	12.8512	308.4102
5.50	.....	.....	10.5784	253.8852	14.1056	338.5126
5.75	.....	.....	11.5611	277.4693	15.4159	369.9579
6.00	.....	.....	12.5892	302.1444	16.7868	402.8580
6.25	.....	.....	.....	.....	18.2137	437.1009
6.50	.....	.....	.....	.....	19.7012	472.7986
6.75	.....	.....	.....	.....	21.2446	509.8392
7.00	.....	.....	.....	.....	22.8487	548.3345

Displacement given in barrels for one revolution based on 100 per cent volumetric efficiency.

To find capacity of pump multiply factor given above opposite plunger diameter and length of stroke by the number of strokes the pump is running per minute.

RECIPROCATING PUMPS (PLUNGER TYPE) DOUBLE ACTING TRIPLEX

LENGTH OF STROKE IN INCHES

Plunger diameter (inches)	18 INCHES		24 INCHES		36 INCHES	
	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours
5.00	13.1150	314.7325	17.4850	419.6450	26.3275	629.4675
5.25	14.4580	346.9611	19.2775	462.6148	28.9152	693.9250
5.50	15.8592	380.6203	21.1569	507.7705	31.7354	761.6557
5.75	17.3438	416.2523	23.1222	554.9385	34.6832	832.4078
6.00	18.8856	453.2148	25.1784	604.2888	37.7676	906.4832
6.25	20.4909	491.7381	27.3186	655.4553	40.9778	983.4800
6.50	22.1644	531.9456	29.5497	709.2001	44.3245	1,063.8001
6.75	23.9008	573.6585	31.8647	764.7610	47.7930	1,147.1416
7.00	25.7054	616.8757	34.2706	822.5042	51.4059	1,233.7563

Displacement given in barrels for one revolution based on 100 per cent volumetric efficiency.

To find capacity of pump multiply factor given above opposite plunger diameter and length of stroke by the number of strokes the pump is running per minute.

RECIPROCATING PUMPS (PISTON TYPE) DOUBLE ACTING DUPLEX

LENGTH OF STROKE IN INCHES

Plunger dia. (in.)	6 INCHES		10 INCHES		12 INCHES		18 INCHES	
	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours
2.5...	.7288	17.4850	1.2144	29.1419	1.4569	34.9706	.....	.....
3.0...	1.0494	25.1784	1.7487	41.9642	2.0979	50.3577	.....	.....
3.5...	1.4284	34.2706	2.3802	57.1181	2.8555	68.5424	.....	.....
4.0...	1.8656	44.7616	3.1088	74.6032	3.7296	89.5248	.....	.....
4.5...	2.3612	56.6614	3.9346	94.4197	4.7203	113.3048	.....	.....
5.0...	2.9150	69.9400	4.8575	116.5675	5.8275	139.8825	8.7425	209.8225
5.5...	3.5272	84.6274	5.8776	141.0467	7.0513	169.2578	10.5784	253.8852
6.0...	4.1976	100.7136	6.9948	167.8572	8.3916	201.4308	12.5892	302.1444
7.0...	.....	.....	9.5207	228.4723	11.4219	274.1697	17.1353	411.2521
8.0...	.....	.....	.....	.....	14.9184	358.0992	22.3808	537.1456
9.0...	.....	.....	.....	.....	.....	.....	28.3257	679.8249
10.0...	.....	.....	.....	.....	.....	.....	34.9700	839.2900

Displacement given in barrels for one revolution based on 100 per cent volumetric efficiency.

To find capacity of pump multiply factor given above opposite plunger diameter and length of stroke by the number of strokes the pump is running per minute.

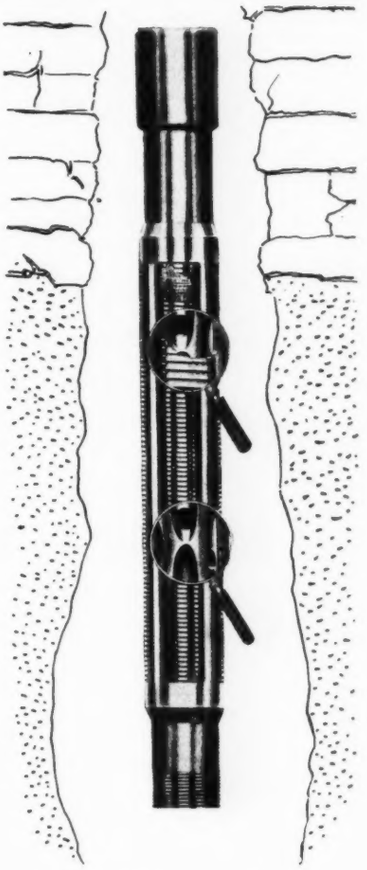
RECIPROCATING PUMPS (PISTON TYPE)

LENGTH OF STROKE IN INCHES

Plunger diameter (inches)	ROD LINE 30 INCHES		JERKER PUMPS 24 INCHES		JERKER PUMPS 30 INCHES	
	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours	Bbls. per hour	Bbls. per 24 hours
3.00	.....	.....	2.0979	50.3577	2.6226	62.9469
3.75	2.0485	49.1678	3.2774	78.6699	4.0971	98.3370
4.00	.....	.....	3.7296	89.5248	4.6624	111.9056
5.00	.....	.....	5.8275	139.8825	7.2850	174.8525

To find capacity of pump multiply factor given above opposite plunger diameter and length of stroke by the number of strokes the pump is running per minute.

DOWN where the Sand Begins



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The Use of Flow Beans

By E. L. DAVIS
Petroleum Engineer, Texas Co. of California*

The question of whether to open the bean of a flowing well wider, or pinch it in, has been a favorite subject of argument of production men for years. He who wants more oil now is for opening it up; the conservative insists on beaning it, feeling that ultimate benefits will be greater. What the actual effect would be or the reason for that effect is usually not well understood.

The bean, or choke, as it is called in the Mid-Continent, is a simple device. It is, in effect, merely an orifice placed in the production lines from the well for the purpose of applying a back pressure on a flowing well or to limit its rate of flow.

It exerts a resistance proportional to the square of the rate of flow of the oil-gas mixture that the well produces. Increasing the back pressure or resistance a flowing well must overcome to produce oil reduces the flow of oil and gas and thereby, of course, decreases the current profit of the operator.

Then why should the operator resort to beaning? He may base it upon previous experience or merely upon superstition. He may have a good reason. Some of these reasons are as follows:

REASONS FOR BEANING

1. To prevent sanding up of the well. Too great a rate of inflow of oil and gas to the well bore from the formation may entrain loose sand and bring it into the well, filling the hole and necessitating cleaning out. Also, too great a reduction of pressure in the well compared to that existing in the formation near the well may in extreme cases (Torrance-Redondo) cause a block of formation to shift toward the hole, collapsing the pipe.

2. To prevent cutting out of fittings at the well head due to sand blasting by sand carried in the production stream. Sand cuts due to high velocity. Beaning reduces the velocity of the fluid in the tubing by compression until it is past the essential controlling fittings at the well. This cutting out used to be a rather common occurrence and was a sources of great expense, including the danger of losing the well if the control fittings (christmas tree) cut out, allowing the well to blow wild. This danger has been practically eliminated by means of improved equipment and technique.

3. To hold back encroaching edge or bottom waters. In many fields water fills the sand below and at the edge of the oil. During rapid withdrawal of oil the more open and permeable sands give up their oil first. Water follows the oil into the well through the same strata. Large volumes of water may make the well impractical to produce. Beaning is desirable to permit a more uniform withdrawal of oil from the sands and a uniform encroachment of edge waters through all the oil-bearing sands. This beaning needs to be done early before water encroachment has gone too far. It is of little benefit after water reaches the well.

4. Beaning is used to prevent what is called "heading" in a well. Heading consists of the well flowing strongly for short periods, followed by periods of no flow (see illustration). During the flow period most of the oil and gas may be blown out of the well, which then requires a fill-up period until sufficient pressure accumulates to start flow again. This rapid alternating of periods of high- and low-pressure is a severe strain on the oil-well casing and formation. Beaning reduces the rate of flow of the heads and tends to spread out the flowing period to cover the time when the well would otherwise be dead. Thus it holds a relatively uniform pressure against the oil sand.

5. In line with the preventing of heading, beaning may be used to prolong the flowing life of a well that would otherwise need to be pumped.

NORMAL FLOWING CONDITIONS

Normal flowing conditions and a heading sequence are shown in the illustration. Figure 1 shows normal flowing conditions. The space between tubing and casing is filled only with gas down to the base of the tubing. The oil and gas mixture as it rises in the tubing becomes lighter and increases in velocity, but is a relatively constant mixture. Assuming so-called "unit" ratio of oil and gas, or 1,000 cubic feet per barrel, this mixture varies from about 80 per cent of gas by volume at the base of the tubing to perhaps 95 to 98 per cent at the lead lines. A minimum velocity of about 9 linear feet per second at the base of the tubing is necessary to maintain the uniformity of this mixture and prevent settling out of the oil.

Figure 2 shows a slug of oil containing less than normal gas entering the base of the tubing. The increased weight of the flow column demands an increased casing pressure to balance it; hence both oil and gas rise in the annular space. This space continues to take most of the gas produced until it is full of gas. The heavy slug of fluid is then blown from the tubing, followed by the excess gas that had accumulated in the annular space (Figure 3). As this gas pressure blows down without carrying fluid, the back pressure on the well is quickly reduced and the well responds with a surge (Figure 4). The fluid rising in the annular space forces a repetition of the heading cycle similar to No. 2. If the required maximum pressure is greater than the well is capable of building up, it will remain dead.

If the bean is now made small enough, its resistance builds up so high when the heavy flow of oil and gas hit that the oil flow is spread out and the stored-up gas pressure is prevented from exhausting itself. Then the rising surge of oil is picked up by remaining gas and carried up the tubing. This tends to restore a condition like Figure 1, except that due to increased back pressure from the smaller bean the rate of production will be lower.

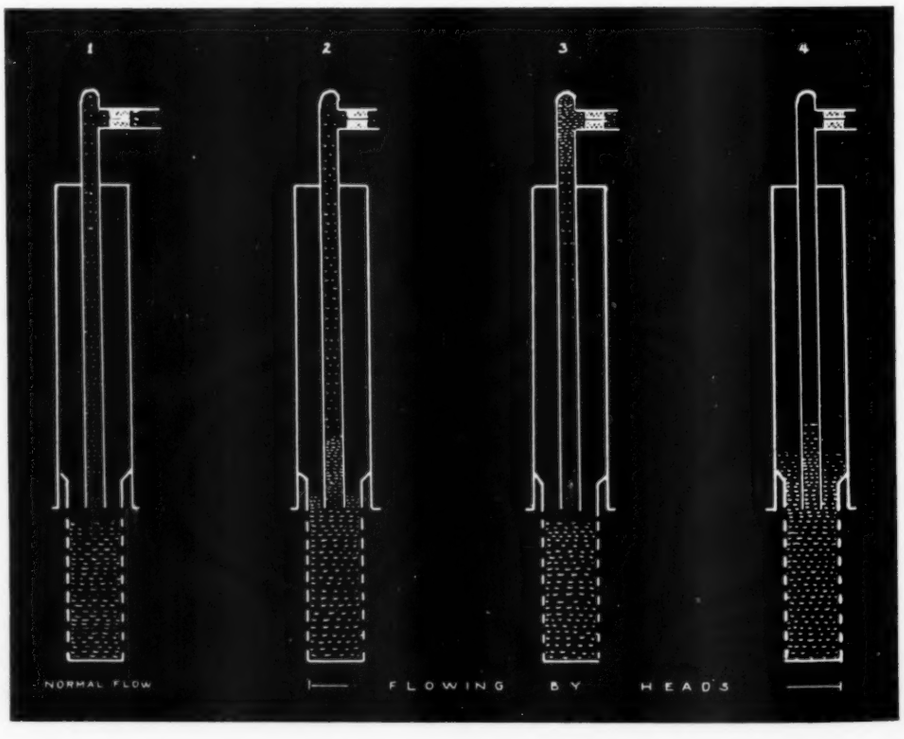
IMPROVING GAS-OIL RATIO

It is apparent that beaning at the surface is rather an indirect method of accomplishing the purpose. If the bean were at the bottom of the tubing, it would act much quicker and be much more favorable to continued flow, because not so much resistance would be necessary to steady the well. It has other advantages also, but the great difficulty of installing and changing such beans has prevented their becoming very popular.

Another method that is in considerable use is that of installing a packer on the bottom of the tubing. By sealing off the space between tubing and casing it prevents oil and gas from accumulating in this space and tends to prevent heading. Thus it lengthens the flowing life.

6. A use of beaning that is rather modern is that of improving the gas-oil ratio. Gas-oil ratio is defined as cubic feet of gas per barrel of oil produced. Gas, by its expansion, is the chief agent in bringing oil into the well, at least during flush production. It is also necessary in lightening the weight of the oil column so that the formation pressure can flow it to the surface. It is desirable to conserve in the ground the extra amounts not necessary in producing the well. Sometimes care-

(Continued on Page 46)



*Before California Natural Gasoline Association at Los Angeles.

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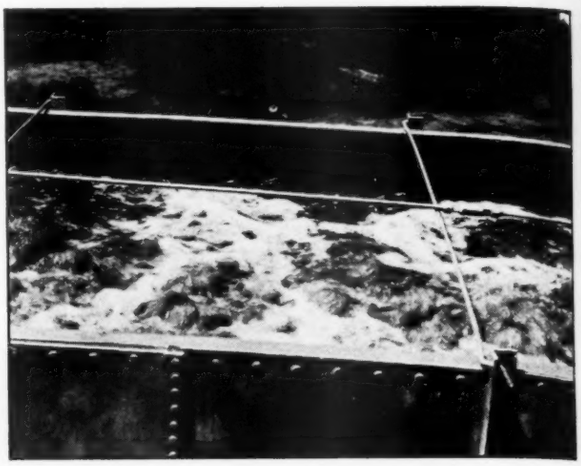
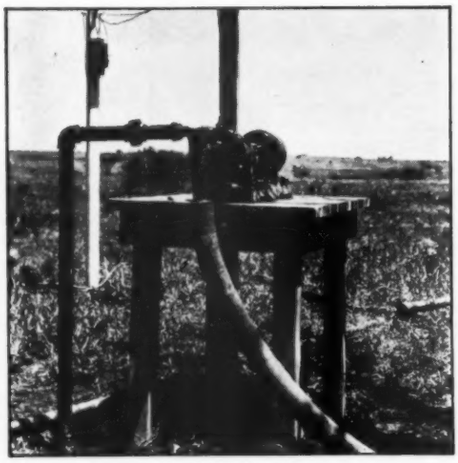
Water-Flooding in Burkburnett Field Is Applied With Success

By L. E. BREDBERG



Back-washing with air to clean the sand and gravel bed



One of the automatically controlled water pick-up pumps used in the field

The first successful water-flooding of an old depleted oil field in Texas, judging from net results already obtained, has been underway since June 21 in the Burkburnett field in Wichita County, North Central Texas. Since that time the input of filtered and treated water has been stepped up from 450 bbls. to 1,100 bbls. per day in the six input wells to the two shallow sands, 360 and 560 feet, with success registering accordingly in the increase in oil production on the lease.

The first water-flooding job undertaken in Texas, in the old Fry pool in Brown County, has apparently not been as successful as the second experiment, the company trying the experiment in the first instance using old producing wells for input water wells. Casing seats did not hold in those wells, which caused a loss of pressure in the water on the sands, and consequently did not achieve the results desired.

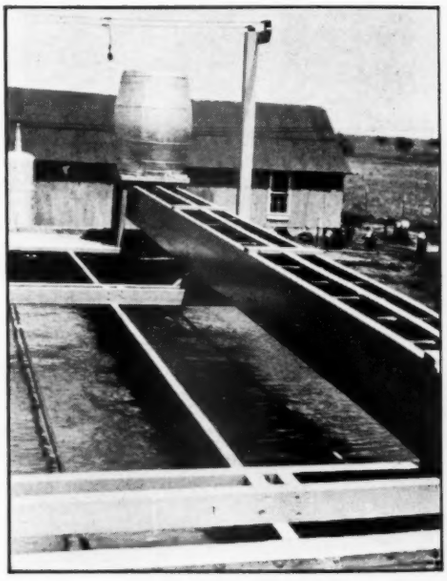
In order to prevent such an occurrence in the Burkburnett experiment, 10 sacks of cement are set around the 7-inch casing in the newly drilled input wells. The cement is dumped with a bailer, using water to force the cement out of the casing and back of the pipe in all the input wells. This method insures a good casing seat and prevents the seats from giving way when pressure is applied to force the water into the sands.

SYSTEM USED

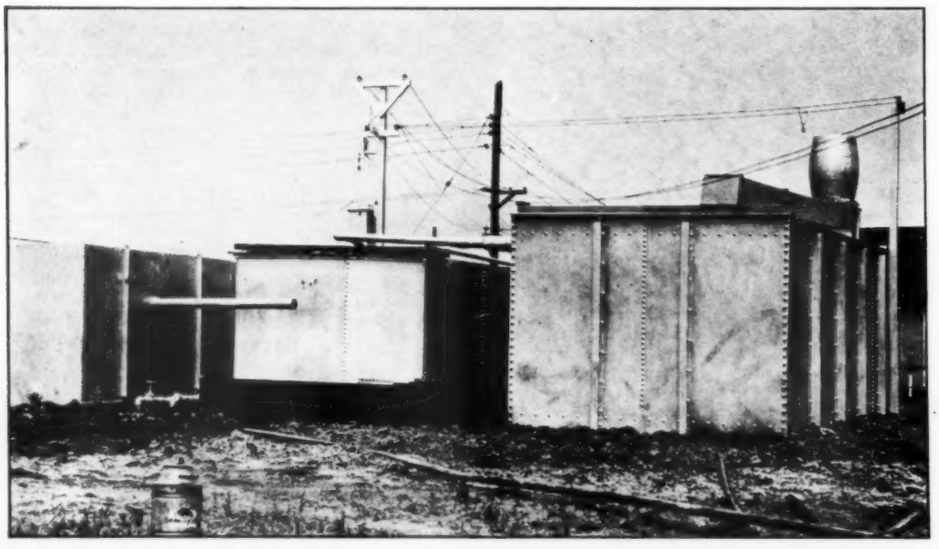
There are four producing sands on the Hardin lease, the lease being experimented with by the McCarty Oil Co. and Ed Peterson, of Wichita Falls. Gains in daily production have already proved the method to be working in accordance to the beliefs and ideas of Sam R. Rugeley, superintendent of the former company, who is in charge of the work. The project was started in a line drive from the northwest to the southeast, although there was no uniform spacing of the old wells when they were drilled. This line drive cuts across the producing trend, which is from the northeast to the southwest, cutting it in half, and driving to both sides. There are 60 acres in the 560-foot sand area which is from 10 to 12 feet thick.

Many companies and independent operators, in this as well as other areas in the state, are following the experiment to note its results. If it proves entirely successful on this lease, other fields in the state will no doubt receive the same kind of treatment in an effort to recover more oil and thus increase the ultimate production.

There are 13 wells on this lease producing from the 560-foot sand, 11 from the 360-foot sand, one in the 480-foot sand and three in the 240-foot sand; there being four producing horizons in the pool, which has been producing since 1918. The upper sands are tight. The lower sands being more porous are consequently the first to be flooded. The 28 wells on the lease had been producing around one-half bbl. each day before the operators started the experiment.



Chemical mixing barrel and wiggle box on top of major treating and filtering tank



Battery of treating and filtering tanks used in the experiment

In preparing for the experiment, the company dammed up a small creek running through the lease, thereby impounding around 100,000 bbls. of surface water. To add to this supply a 16-foot water well, furnishing 800 bbls. of water per day, was dug and a 7-inch conduit set down to the quicksand and gravel bed. As the water is being used to flood the deeper sands, it can later be pumped out and used again to flood the upper sands, thereby conserving water in the work.

Three settling and treating tanks, each having a capacity of 250 bbls., are used in preparing the water to be pumped into the sands through the

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input wells. Alum and lime are used in treating the water, 5 pounds of alum and 15 pounds of dehydrated lime being used each day for treating 1,000 bbls. of water. An extension from the exhaust of the water pumping engine to the treating barrel enables the use of the exhaust gasses to agitate the chemicals in the barrel and to maintain a uniform lime mixture, otherwise the chemicals will not mix properly and the treating of the water would not be thorough. Old refinery condenser boxes are used for settling and treating tanks, same being set on sills to prevent the bottoms from rusting and corroding out during the experiment. One of the tanks also supplies water for the engine used in supplying pressure for the work.

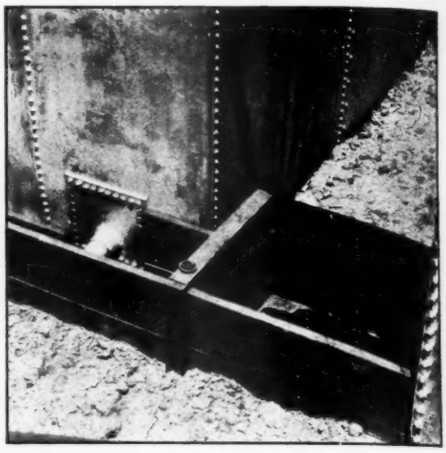
The main tank is supplied with a relief valve to prevent any possible explosion if something caused trouble and pressure was hurriedly built up, and an automatic cut-off on a 2-stage motor pump which supplies water to the tanks, allows the pump to work 2 hours and then cut off 1 hour, pumping 1,000 bbls. per day. A second pick-up motor unit has already been installed, which insures sufficient water for the increase in the input demand.

WINDJAMMER SUPPLIES PRESSURE

For providing pressure and pumping water to and into the wells a 35-horsepower gas engine operating an air jammer, is housed near the water tanks. A pressure of 150 pounds is required on the surface, in addition to 250 pounds hydrostatic pressure on the sand, making a total of 400 pounds pressure required to start the experiment. This engine and windjammer provide the necessary pressure. The pickup pump has a greater capacity than the power pump, consequently the latter is always supplied and a constant level is maintained in the water tanks.

The air pump and 8' by 3' tank near the engine house serves also in furnishing pressure for back-washing the tanks to clean out the 4 feet of sand and gravel in the third filter and treating tank.

The main tank in the series of three filtering and treating tanks is divided so as to furnish as much water travel as possible. From 75 to 80 feet of surface travel is supplied by the three tanks. A wiggle box, located on top, and running lengthwise of the main tank aids in mixing the chemicals and water. It is about 8 inches wide and 10 inches deep with a series of partitions arranged throughout its length, acting as baffles.



Sediment box into which the bottoms from the treating and filtering tanks are drained

The chemicals run directly from the chemical barrel into one end of this wiggle box, down its full length then into the first tank. Water from the first tank travels into the second and from there into the third where the sand and gravel filter bed is located. A sediment box is located at the bottom of the second tank, catching any sediment deposited in any of the three tanks, same being drained from the bottom of the tanks into this box and out to an old slush pit nearby. All water is being metered into each well and records kept of same.

The Use of Flow Beans

(Continued from Page 42)

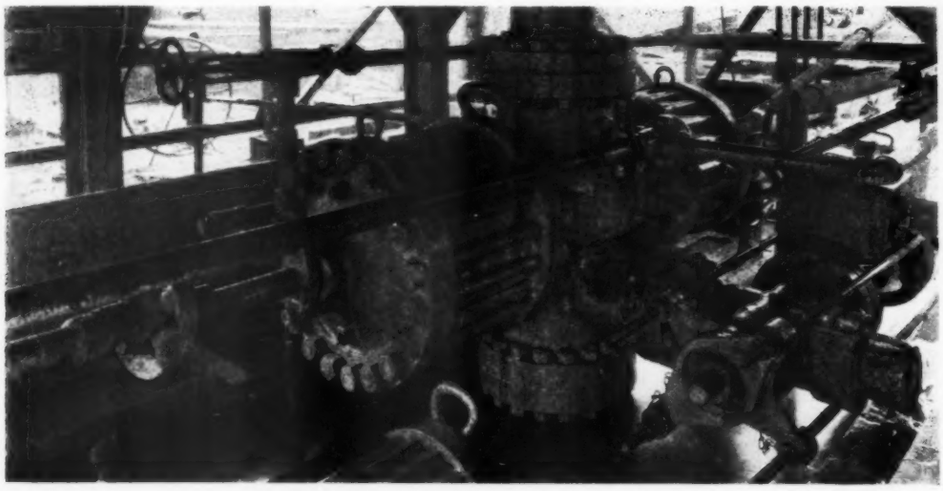
ful beaning will reduce the ratio of gas produced with the oil so that a larger amount of oil will ultimately be produced by flowing. Occasionally the opposite is the case and the lowest gas-oil ratio is obtained by reducing the back pressure as much as possible. There is usually one rate of flow which has the lowest possible gas-oil ratio. Lower and higher rates will give a higher ratio.

In special cases the well may be beaned at the oil and gas separator. One case is where stage separation is used. Most of the gas is drawn off and run through the gasoline plant from a separator operating at well pressure. This makes compression unnecessary. One or more lower pressure stages are then necessary to separate all the available natural gasoline and gas from the oil.

This is a problem where the interests of the oil producer and gasoline man overlap. It offers an excellent opportunity for cooperation for their mutual benefit.

In determining when and how much to bean, a great deal depends on experience and knowledge of the behavior of the oil zone. Aside from these, probably the most valuable aid to diagnosis is a wet gas meter on each flowing well. Lacking this, recording pressure gauges on tubing and casing and an accurate estimate of gas production are necessary.

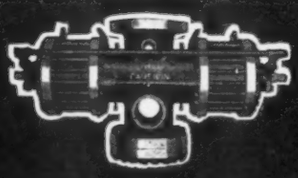
Production engineers and even some production foremen find an inspection of the gas charts yields valuable information. The installation of separate meters for each flowing or gas-lift well will almost always be a good investment, even though it may seem unnecessary to the gas or gasoline man.



FINAL HAZARD IN SETTING CASING ELIMINATED by Suspending and Sealing Through This Oversize Hook-Up Before Cementing

To avoid taking any chances whatsoever while landing, suspending and cementing casing, and while flanging on upper half of casing head, several major operators have adopted the use of Cameron drilling control hook-ups having a vertical bore large enough to permit running the casing hanger through the control hook-up, and suspending casing, before pumping cement. Procedure is to run casing, land and suspend casing on hanger in casing head below control hook-up, then pump cement. Casing hanger seals annular space between casing strings, and eliminates the danger involved in relying on a good cement job while removing drilling control hook-up and flanging on upper half of casing head.

The hook-up above shown consists of a 14" Cameron Pressure Operated Master Gate Valve flanged above lower half of 13⅜" casing head, with a 14" Cameron Type SDA Pressure Operated Blowout Preventer flanged above the master valve. Vertical bore of this hook-up is 13⅝", providing ample clearance for running casing hanger having an O.D. of 13½".



FEATURES

1. Instant pressure opening and closing.
2. Remote control from derrick floor.
3. Independent ram closing and locking screws.
4. Self-feeding ram packing elements.
5. Self-centering pipe rams.
6. Ram collar recesses hold pipe up or down.
7. Blind rams or pipe rams interchangeable.
8. Integral flowline outlets and body flanges.
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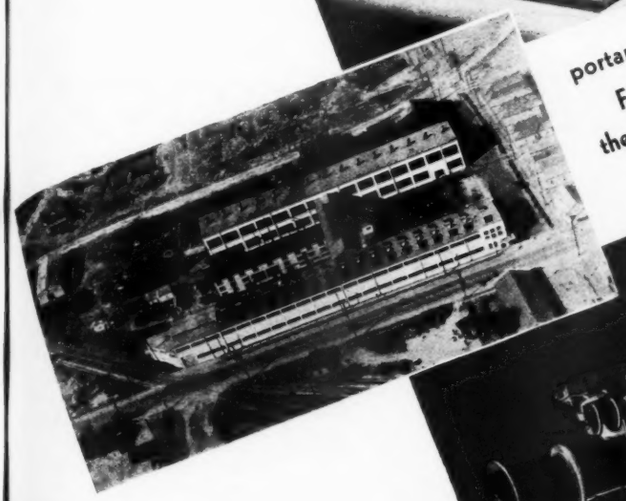

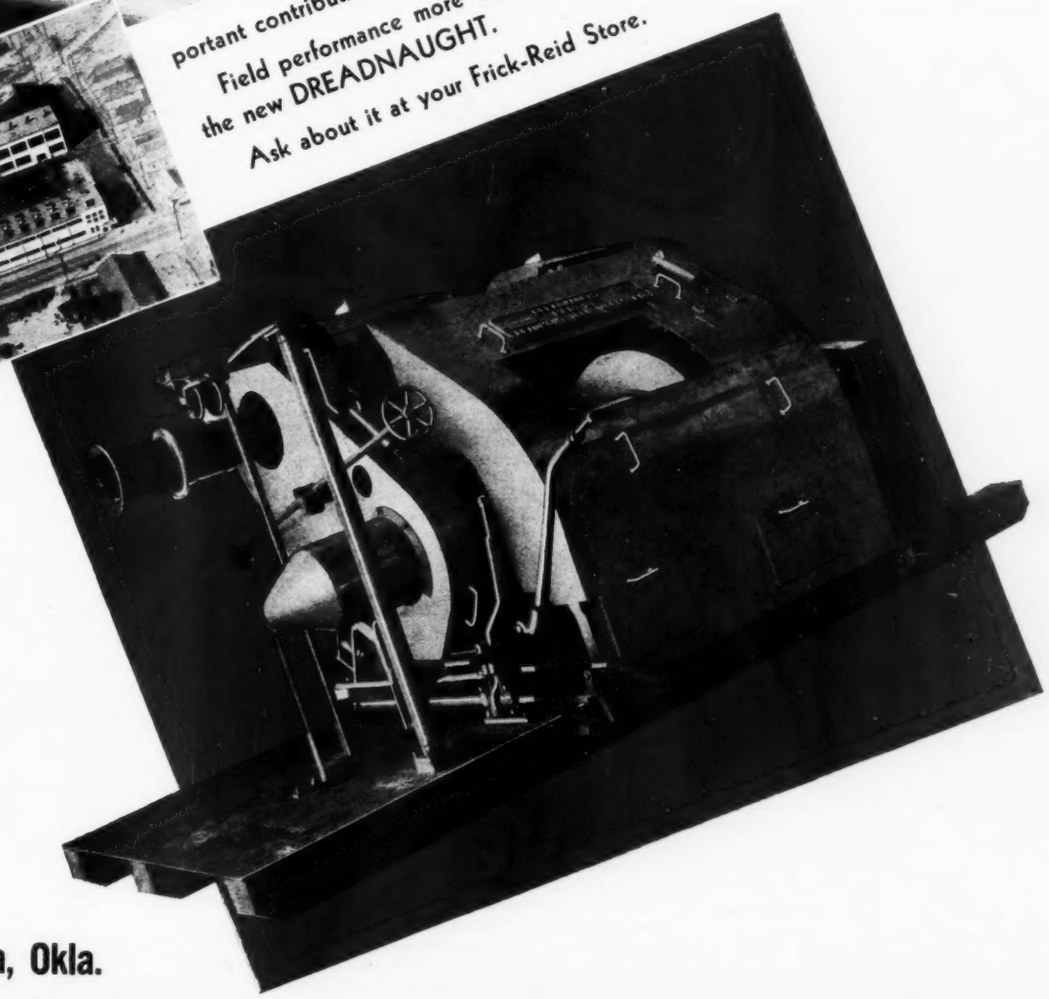

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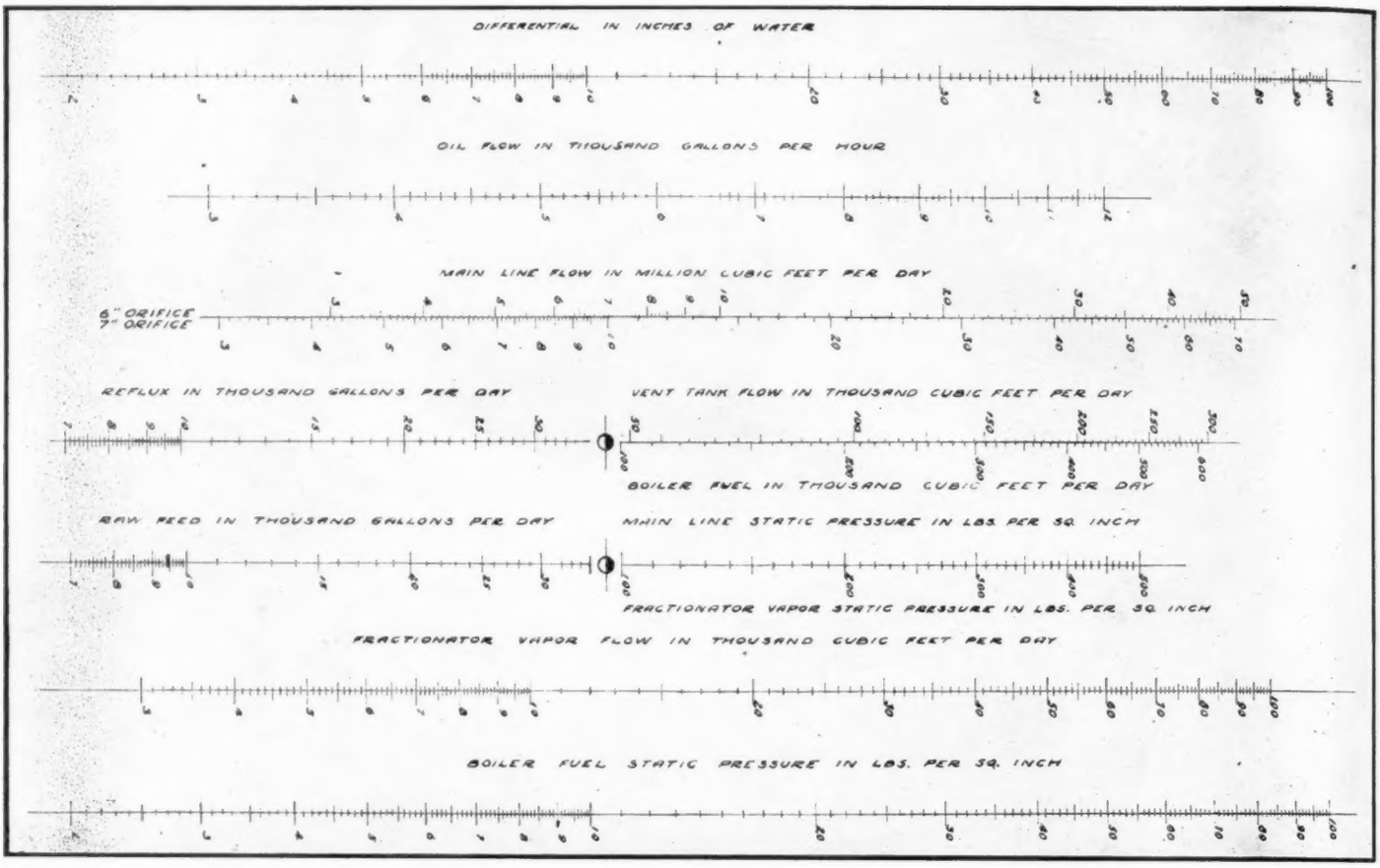
DIFFERENTIAL IN INCHES OF WATER
OIL FLOW IN THOUSAND GALLONS PER HOUR
MAIN LINE FLOW IN MILLION CUBIC FEET PER DAY
6" ORIFICE
7" ORIFICE
REFLUX IN THOUSAND GALLONS PER DAY
VENT TANK FLOW IN THOUSAND CUBIC FEET PER DAY
BOILER FUEL IN THOUSAND CUBIC FEET PER DAY
RAW FEED IN THOUSAND GALLONS PER DAY
MAIN LINE STATIC PRESSURE IN LBS. PER SQ. INCH
FRACTIONATOR VAPOR STATIC PRESSURE IN LBS. PER SQ. INCH
FRACTIONATOR VAPOR FLOW IN THOUSAND CUBIC FEET PER DAY
BOILER FUEL STATIC PRESSURE IN LBS. PER SQ. INCH

Chart Used to Check Efficiency of Gasoline Plant

By J. F. THOMPSON
Chemist, Lone Star Gas Co., Trinidad, Tex.

Nomographical solutions of gas and liquid measurement problems for any one given natural gasoline plant are simplified by the accompanying chart. For example, suppose an average differential of 24 inches of water across the meter of the boiler fuel line with a static pressure of 53 pounds per square inch absolute was obtained for unit time. (In this case, 24 hours). To translate this data into terms of volume flowing, locate the differential on the furthermost left-hand scale of the chart. Locate the static pressure on the furthermost right-hand scale of the chart. Connect these points with a straight line, which will intersect the scale marked "Boiler fuel in thousand cubic feet per day" at a point which will have the value that would be obtained by calculation from the orifice equation of the meter.

All of the gas volumes are obtained in a similar way, using the appropriate scales. In the case of liquids, a horizontal line drawn to the intersection with the appropriate scale from the differential scale will give the calculated value. This chart was constructed for the meters and coefficients shown in Table 1.

A nomograph for the solution of gas volume data consists of three vertical equidistant lines. On the left-hand line, the markings are laid off by means of the "C" scale of the polyphase duplex slide rule. The scale is labeled differential pressure in inches of water. The right-hand scale is laid off with the "C" scale of the slide rule also, and is labeled static pressure in pounds per square inch. The middle line of the three vertical lines is the answer line, and this line is also laid off from the "C" scale of the slide rule.

TABLE 1—METER AND COEFFICIENT VALUES

Name—	Coefficient	Static pressure range	Differential pressure range
Main line (6-in. orifice)	9123	0-500	0-100
Main line (7-in. orifice)	12986	0-500	0-100
Boiler fuel	378	0-100	0-100
Vent tank	178	0-250	0-100
Fractionator vapors	168	0-500	0-100
Oil circulation	1700	.....	0-100
Reflux gasoline	148	.....	0-10
Raw feed gasoline	145	.....	0-10

To find this point, assume any two values of differential and static pressure, and calculate the answer from the orifice equation. Now, using the same values, locate them on the differential scale and the static pressure scale, connect them with a straight line, and mark the intersection of this line with the middle line of the nomograph with the value that was obtained from calculation. It is best to assume two or more sets of values, and have them serve as checks. On the middle line of the nomograph, set the "C" scale of the slide rule to correspond with the intersection of the straight line connecting the assumed points, and transfer the markings from the rule to the paper.

For example, assume 20 inches of water is the differential pressure and a static pressure of 38.1 pounds per square inch. From the orifice equation for the boiler fuel meter, calculate the amount of gas flowing for 24 hours. Locate the value 20 on the left-hand scale, the value of 38.1 on the right-hand scale, and connect these points with a straight line. This line will intersect the line marked "Boiler fuel in thousand cubic feet per day" at the value of 250. Now place the "C" scale of the slide rule on the line, and make the value of 25 on the rule just correspond with the intersection of the answer line and the straight line connecting the values of 20 and 38.1.

Then transfer the markings on the rule to the line, and the nomograph is complete for this one meter. If the range is between reasonable limits, as is usually the case, one master differential scale may be made to serve all meters. Since the three lines composing a nomograph must be equidistant, shifting the right-hand line (static pressure) will shift the answer line. In this way different meters may be calculated and drawn and placed on one sheet of ordinary paper. Since in liquid measurement only one variable is encountered only two lines are needed for a nomograph.

These nomographs may be plotted from the master differential scale. A line drawn horizontally from the master scale intersects the liquid scale line at the same value as would be calculated. For each value of differential, a value must be calculated, a horizontal line drawn to intersect the liquid scale, this intersection being marked with the previously calculated value.

This nomographical solution of natural gasoline plant measurement problems was presented at the 1936 convention of the Natural Gasoline Association of America as an "Operating Kink."

A giant of strength on the job. Extra strong center truss eliminates center pin deflection. Base made of heavy 24" CB-section beams. "OILWELL" #300 Crown Block with Mid-Continent Type Sand Line Sheave Mounting.

Just as safe, strong and speedy as it is big. "OILWELL" 80" Streamline Traveling Block.

"Oilwell" No. 150-B Oilbath Rotary Swivel, as shown here, has been used in drilling some of the world's deepest wells. The new Di-Hard Water Tubes inlaid and overlaid with Di-Hard Metal are establishing records for long life.

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USE ONE SET OR THE OTHER FOR ECONOMY	HEAVY DUTY	HEAVIEST DUTY
"OILWELL" Crown Block -	#200	#300
"OILWELL" Streamline Traveling Block - - - - - -	60"	80"
"OILWELL" Oilbath Rotary Swivel	#100	#150-B

Sheaves for the No. 200 Crown Block and 60" Traveling Block are interchangeable as are also the Sheaves for the No. 300 Crown Block and 80" Traveling Block. Water Tubes for the No. 100 and No. 150-B Swivels are interchangeable.

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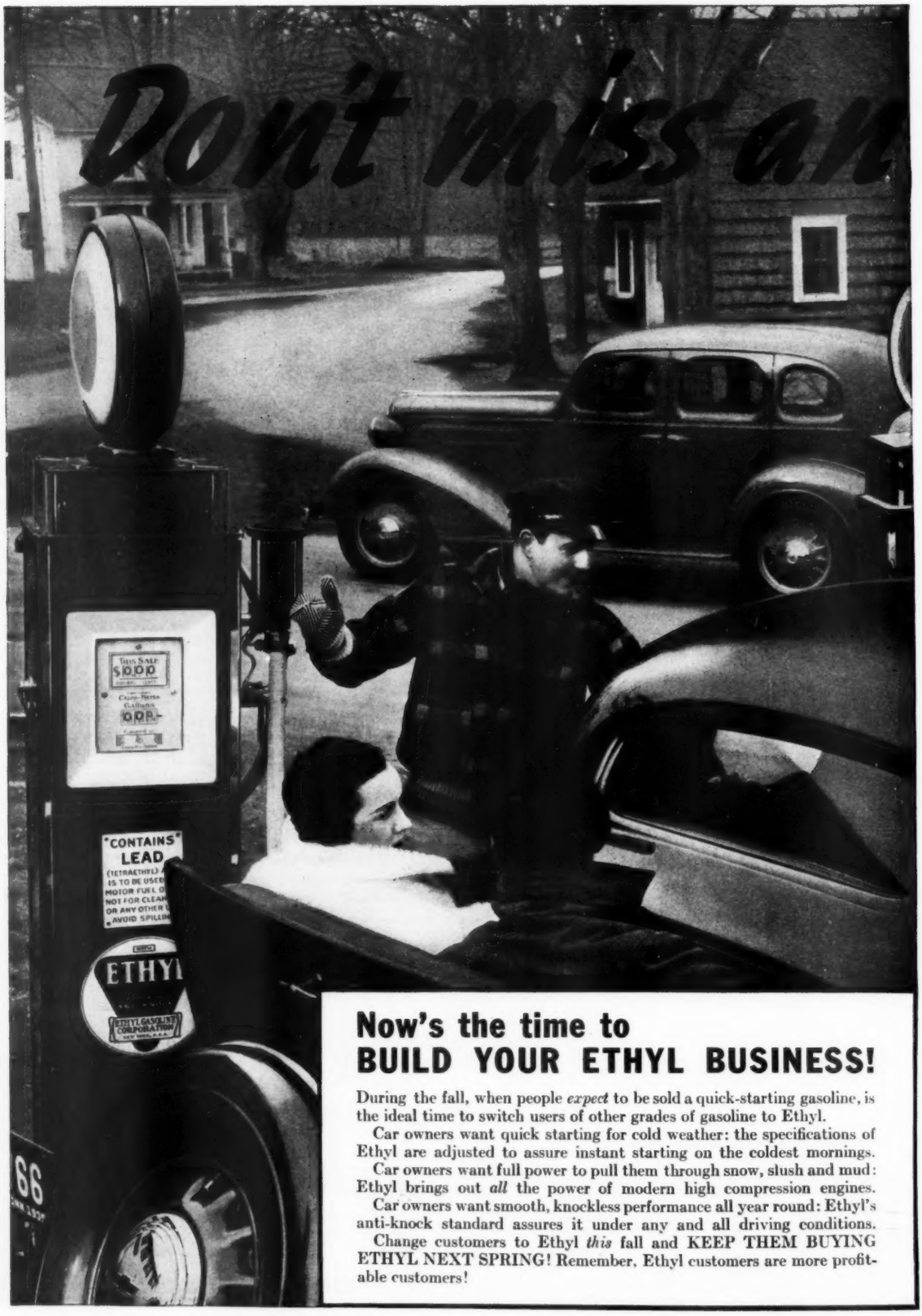

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During the fall, when people *expect* to be sold a quick-starting gasoline, is the ideal time to switch users of other grades of gasoline to Ethyl.

Car owners want quick starting for cold weather: the specifications of Ethyl are adjusted to assure instant starting on the coldest mornings.

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Car owners want smooth, knockless performance all year round: Ethyl's anti-knock standard assures it under any and all driving conditions.

Change customers to Ethyl *this* fall and **KEEP THEM BUYING ETHYL NEXT SPRING!** Remember, Ethyl customers are more profitable customers!

ETHYL customer.

There's Money in your ETHYL Business...

HERE'S PROOF

Early returns from a national survey to determine the cash value of buyers of Ethyl, "regular" and "third grade" gasoline reveal some jarring facts for every distributor and dealer in the industry. Let the results of the first thousand returns speak for themselves:

	Ethyl Users	*"Regular" users*	*3d Grade users*
Average price paid for oil	**30.4¢**	**26.7¢**	**21.3¢**
Buy premium oil	**74.7%**	**44.3%**	**10.9%**
Buy "regular" oil	**24.3%**	**48.9%**	**30.1%**
Buy 3d grade oil	**.5%**	**6.8%**	**57.6%**
Average mileage between crankcase drains	**1,382**	**1,451**	**2,331**
Average mileage between grease jobs	**1,190.7**	**1,505.5**	**2,149**
Average gallons of gas purchased per stop	**9.7**	**6.8**	**4.34**
Percent of users who filled tanks when buying gasoline	**75.2%**	**37.4%**	**16.4%**
Percent of buyers who made purchases of other than gasoline	**29.5%**	**10.0%**	**8.2%**
Average amount of these additional purchases	**$2.47**	**$2.15**	**$.77**

These figures are the result of taking buyers "as they come" in all types of stations, in all sections of the country. The survey is continuing.

Meanwhile, hold on to your Ethyl customers and increase them by "stepping up" your "regular" buyers. Very definitely, ETHYL BUSINESS is PROFITABLE BUSINESS!

WITH ETHYL — ETHYL GASOLINE CORPORATION

NEXT TIME SELL ETHYL

PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Whipstock Offers Common Method of Drilling Deflected Oil Wells

In answer to a question signed S. E. Y. in a recent issue of The Oil and Gas Journal you gave some of the reasons for drilling deflected holes for oil wells. May I ask how this deflected drilling is done? Is there some particular way of handling the regular rotary outfit, or is there equipment especially designed for this purpose? Has the deflected drilling method been in use long?—N. A. O.

Drilling of deflected holes for production of oil is a practice of relatively recent adoption, but directed drilling has been practiced for many years in the mining industry, where core holes are deflected in the exploration and sampling of veins for mapping of the ore bodies. Controlled drilling grew out of unpleasant experiences with crooked holes resulting from rapid drilling during the boom days of the Seminole and Santa Fe Springs fields.

To survey the course of the holes drilled by rotary or cable tools several different instruments have been developed, and by the use of these instruments and the application of whipstock and knuckle-joints controlled drilling has been made practical. The first method used to make a deflected hole was to tilt the rotary turntable and start the hole as nearly as possible in the desired direction, and later to continue its course in the predetermined path by controlling the weight on the bit and regulating the speed of rotation. A study of crooked holes developed the fact that too much weight on the bit and high-speed rotation resulted in the holes deflecting from a vertical, and having this knowledge some applied it in attempting to direct the course of the hole to some predetermined objective underground.

Along the Gulf Coast it long has been the practice to whipstock out of a vertical hole and set another liner when the first liner has become plugged and useless. The whipstock is a bar of steel about 20 feet long tapered on one side so that the bit will be deflected away from the sloping side when the whipstock is set in the hole. By orienting the position of the whipstock in the hole it is possible to deflect the bit in any direction and by repeating the operation at varying intervals to make the degree of deflection as great or small as the operator desires.

Paraffin Trouble in Canadian Wells Due to Excess Gas

We are operating oil wells in the Trenton formation in Ontario. The depth to the bottom of the hole is 3,300 feet. The wells are pumped through 2-inch tubing and considerable paraffin accumulates in this flow string. The wells produce about 50,000 to 75,000 feet of gas along with the oil into a pressure separator working under 510 pounds pressure at one well and under 150 pounds at another. Our worst paraffin trouble occurs in the well working against the lower back pressure. Can you suggest some way to reduce the quantity of paraffin accumulating in the tubing?—E. P. R.

From what you tell us it is very evident your trouble comes from rapid expansion of the gas in the annular space around the tubing after the well has been pumped down enough to bring the fluid level below the gas sand. You fail to tell us the diameter of the hole; but if it is a 6⅝-inch well at the bottom, 100 feet of hole would hold about 3.58 bbls. of oil. If it is assumed that the well makes 4 bbls. per day along with 50,000 feet of gas, the gas-oil ratio is 12,500 to 1.

This volume of gas expanding from formation to atmospheric pressure will tend to take heat from the oil in the tubing and in this manner the paraffin is precipitated.

Our suggestion would be to select a smaller diameter string of tubing, run it with packer on casing and then allow the oil and gas to accumulate below the packer and flow the well through the tubing. This may require the lowering of pressure on the oil and gas separators, but it will eliminate the power necessary to lift the oil, and this power can be used to compress the gas to line pressures for distribution.

So far as we know the only time salt water is of any advantage in an oil well in combating paraffin troubles is when the water is hot. It sometimes happens that edge or bottom-hole waters have appreciable temperatures and in such instances the heat in this formation water will tend to retard precipitation of paraffin.

As salt water is used in refrigeration plants it seems folly to add cold salt water to the well where expanding gas will chill this water as well as the oil and lower temperature of everything in the hole and tend to maintain this lower temperature.

Without more definite information it is not possible to advise regarding the possibility of flowing these wells, but whether pumped or flowed it seems to us to be advisable to run the tubing with a packer between the bottom of the casing and the tubing to force all gas to travel down through the oil before it can escape into the tubing. This ought to help even in pumping, for mixing gas with the oil should lighten the fluid column and assist in lifting the oil to the surface.

WHY THEY CALLED IT

Culvert

The culvert, familiar to motorists and an essential adjunct of the oil-field road as well as of the concrete highway, is a transverse drain or waterway under the road, designed to provide drainage, with which fills otherwise would interfere. It usually is constructed of brickwork, masonry, tiles or iron pipes. The word "culvert" is of obscure origin, but probably dates back only to the beginnings of English canals, about 1770. It seems to have crept into the language from a local dialect and is believed by many to have been a corruption of the French "couloir," a channel or gutter. One authority suggests a French-Dutch origin, from "coul," flowing, and "vaart," a canal. An English philologist hazards a guess that "culvert" may have been an engineer's surname as "macadam" was.

East Texas Field West Edge Wells May Continue to Produce

Under the present proration orders how long will it take for water to rise 1 foot vertically in the formation in the East Texas field?—L. R. W.

It has been reported and is generally accepted by production men and engineers familiar with this field that the water table in the East Texas oil field is rising vertically at the rate of about one-tenth of an inch per day. Under this movement the question has been raised as to why the west edge wells have not gone entirely to salt water instead of many of them still producing some oil.

The probable explanation as to why these west side wells still make oil is to be found in the method of production followed. Because there is no restriction as to volume of water removed these west side wells are producing each day just as much salt water as possible. This production tends to lower formation pressure immediately around the water well and creates a difference in pressure between the water well and adjacent oil wells which are restricted to a maximum of 20 bbls. per day because they are classified as marginal wells.

By creating a differential pressure in favor of the water well the tendency for any fluid in the formation, whether it is oil or water, is to flow toward the point of lower pressure. Under these conditions the water will flush oil from the oil sand in every direction around the salt water well and it will be produced along with the water.

The movement of oil from up-dip into the salt water well is possible because all wells along the west edge of the field were only drilled into the producing formation a few feet and the level of the bottom of the well is therefore very near the top of the formation, and if this level is projected to the east it will pass through the upper portion of the producing formation where that section of the Woodbine sand may still be saturated with oil. The west dip of the producing formation in the East Texas field is gentle enough to make the top of the oil sand almost level in adjacent wells.

It therefore seems that if water in relatively large quantities is withdrawn from this common reservoir and in removing this water voids in the pores in the sand have been created and the formation pressure lowered, it must follow that these voids will be filled with fluid, either oil or water or both, from areas of higher pressure.

In the Powell field, Texas, along the Mexia fault, where Woodbine sand carried the oil and where the wells went to water relatively early because of rate of production and depth of penetration it is known that oil was flushed out of the sand by salt water when wells were pumped with the working barrel set high in the well, or near the top of the fluid level. Oil tended to rise to the top of the water and when it was pumped out together with some water the hydrostatic head effective on the face of the formation was lowered. This lowering of pressure against the sand face caused salt water to move toward the bottom of the hole, which was a point of low pressure, and in so doing a considerable volume of oil was flushed out of the pores in the sand.

It is something like this which is going on in the west side wells in East Texas at this time so long as unlimited volumes of salt water are being removed. It is an open question as to the relative quantity of oil being drained in from adjacent properties and the oil being drawn up from the undrilled portion of the producing formation beneath the well. The logical thing to do would be to core the complete section below the bottom of the water well and determine the oil saturation and be guided accordingly in future production.

To stand

WEAR, HEAT *and* PRESSURE

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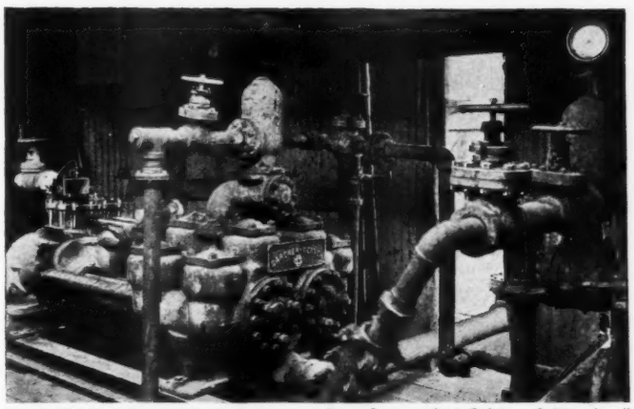
● *Gasoline Pipe Line Pump, made by Prescott Co., using liners, heads, plungers, fluid bodies and piping of a high test variety of Nickel Cast Iron. Tensile strength is 40,000 p.s.i. minimum. Depending on the type of castings used, the percentage of Nickel varies from 1 to 1.75.*



● *The Gardiner-Denver steam slush pump shown here, as installed in a California oil field, resists wear, abrasion and stress in its daily work, with fluid cylinders, pistons, cylinder liners and valve plate covers of cast iron containing 1.25 to 1.75 per cent Nickel and 0.30 to 0.50 per cent chromium.*

● *In Diesel engines, cylinder heads and liners like these have to stand a wide range of heat, under varying pressure. Their strength and "growth" must vary little under repeated heating, and they need the wear resistance that comes from a dense uniform structure. These requirements are met by cast irons containing up to 2% Nickel.*

● Many jobs in the oil field require properties formerly considered away out of the range of cast iron.

But by applying modern foundry practice as well as alloying principles, foundrymen have created varieties of cast iron capable of developing higher strengths, improved toughness and resistance to wear, corrosion and heat. The immediate result is that the oil fields now use these sturdy Nickel alloyed cast irons in many applications, from slush pumps to Diesel engines.

Take advantage of the Inco engineers' wide experience to get exactly the right composition to do each of your jobs. For specific advice, address:

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DEPARTMENT OF GEOGRAPH
THE UNIVERSITY OF NEBRASKA

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Army Method for Octane Value of Aviation Fuel

What is the army method for determining octane value? This is mentioned by Buc and Aldren in The Oil and Gas Journal, June 18, 1936, page 43.—F. H. A.

The Air Corps, U. S. Army, requires that the knock test for aircraft fuel shall be determined in a C.F.R. engine modified in several details. These are given in Air Corps Specification No. 3566-A., April 15, 1935. The essentials are:

Sec. 6. Par. 1, A—Cylinder. Special C.F.R. with a 2⅝-inch bore. The distance between the top of the cylinder barrel and the top of the combustion chamber shall be 13/32 inch. B—Piston. Five ring aluminum alloy. C—Intake Valve. Conventional (unshrouded). D—Exhaust Valve. Sodium cooled with 7/16-inch diameter stem and seat faced with stellite. E—Camshaft and Valve Timing. The standard as used with Method 600.1. F—Spark Plug. An HT-300, BG-157, or equal, with 0.015 inch to 0.020 inch electrode gap. G—Carburetor and Intake System. Standard C.F.R. down draft with 7/16-inch diameter venturi and standard burgess muffler, 19 inches long. The carburetor throttle section shall be bolted direct to the cylinder intake port face without a gasket. The A.S.T.M.-C.F.R. method intake heater shall not be used. H—Cooling System. Specified in Method 600.1. I—Cooling Liquid. Commercial diethylene glycol with water to give a boiling point of 165° C. J—Oil. Three quarts in the crankcase. K—Oil Thermometer. Permanently installed within the crankcase with thermometer bulb completely immersed in the crankcase oil. L—Temperature Plug. Shall be screwed into the ⅞—18 tapped hole in the cylinder head. The plug shall be in circuit with a suitable pyrometric millivoltmeter or potentiometer capable of detecting a temperature change of 1° C. for indicating the degree of knock or heating tendency of the fuel.

2. A—Normal Rated Speed shall be 1,200 r.p.m., ± 20 r.p.m., but shall be held to a constant r.p.m. throughout the test to within ± 5 r.p.m. of the constant normal rated speed. B—Throttle Opening. Full. C—Spark Advance. 30 degrees before top dead center. D—Oil Temperature. 71° to 82° C. E—Oil Smoke. None in the exhaust on cutting the ignition switch and shutting off the fuel, when engine is running at normal rated speed.

3. Fuel-Air Mixture Ratio. At the required temperature plug reading, shall be that which produces a maximum reading of the temperature plug. The mixture ratio shall be determined by varying the carburetor air bleed or float level in increments until the adjustment which produces a maximum temperature plug reading is found. This mixture ratio will be hereafter defined as maximum knock mixture strength.

4. Determination of Standard Plug Temperature. A—Maximum knock mixture strength shall be determined for C.P. benzene, and B—For a mixture of 88 parts iso-octane and 12 normal heptane. C—Compression ratio shall then be adjusted until the same temperature plug reading is obtained with both fuels. D—With the fuels and conditions as specified in Sec. 6, 4. A, B, and C, the engine shall cease firing instantly on switching off the ignition and the connection of the alternating current motor-generator with the power line. The cessation of firing is not required to be maintained after the engine rate of revolution has fallen off appreciably. Cessation of firing as defined above will hereafter be defined as a clean cut of the ignition switch. If the fuels specified in Sec. 6, 4. A, and B, when tested as required in Sec. 6. 4. C, do not produce a clean cut of the ignition switch, the engine condition is at fault and the engine should be examined for defects, particularly as to carbon deposits or spark plug condition. E—With temperature plug reading as specified above, a clean cut of the ignition switch shall be obtained on: (1) Primary reference standards used. (2) Secondary reference standards used. (3) Fuel being tested against primary or secondary reference standards. In the event that the fuel refuses to cut clean on the ignition switch at the standard temperature plug reading, the compression ratio shall be reduced until it does cut clean and its antiknock value shall be regarded as equal to the blend of the primary or secondary reference standards which produces standard temperature plug reading at the compression ratio just producing a clean ignition cut on the fuel. F—The plug temperature determined in 4. C, shall thereafter be recorded as the standard at which all fuels shall be compared. This temperature shall be checked at weekly intervals if aromatic or alcohol blends or highly cracked gasolines are being knock tested.

Par. 5, A—If the fuel is being tested to determine if it meets a specified antiknock requirement, it shall be matched against the required primary or secondary reference standard with compression ratio, mixture strength and other conditions set as specified herein. On an average of three alternate comparisons, the fuel shall be equal to or exceed the required reference standard. B—If the supposed antiknock value of the fuel is unknown, the engine shall be adjusted to standard temperature plug reading or clean cutting of the ignition switch as specified in Sec. 6, 4. and the blend of primary or secondary reference standards which matches it shall be determined. On an average of three alternate comparisons, the blend of reference fuels which equals it shall be considered a match.

SPECIFICATIONS

Lubricating Oil Class D or S.A.E.

PART 3

Flashpoint. Not below passing temperature given in Table 3a. One credit allowed if f.p. is not less than the appropriate minimum temperature for credit given in Table 3a.

TABLE 3a.

S.A.E. No.	Min. flash Pass/credit °F.	Max. pour Pass/credit °F.
20	340/400	40/0
30	350/410	40/0
40	370/425	40/5
50	395/445	40/10
60	425/475	40/15
70	460/510	40/15

Oxidation number. Sligh number shall not be higher than 50. One credit allowed if this is not higher than 20.

Neutralization number. Shall not be above 0.30. One credit allowed if not above 0.10.

Corrosion. No more than slight discoloration of copper strip in oil at 212° F. for three hours.

Part 4 next week.

Method for Finding Quantity of Oil in Waste Waters

It will be much appreciated if you will give me the directions for making the determination of oil and organic matter in refinery discharge water. The method I want is one making use of mixture of extracting solvents.—E. T. A.

The method proposed by the American Petroleum Institute for the examination of refinery wastes containing oil makes use of solvent mixtures. (1) Carbon bisulfide 55 per cent and ether 45 per cent. (2) Carbon tetrachloride 45 per cent and ether 55 per cent. (3) Benzol for routine tests.

Procedure.—Sufficient solvent (either No. 1 or No. 2), is added to a separatory funnel containing the sample (10 to 50 cc.), to bring the total to about 100 cc. The sample is shaken, and the solution of oil in the solvent is transferred, through a filter, to a weighed evaporating dish. The sample is then shaken with two successive portions of 50 cc. each of solvent and these, in turn, are transferred through the filter to the dish. The filter is washed thoroughly with a small quantity of fresh solvent, which is also added to that in the evaporating dish. The dish is placed on a steam bath and the solvent is evaporated slowly. After the evaporation has been completed, the dish is dried at 105° to 110° C. in an oven for one hour, then cooled and weighed. The difference in weight of the evaporating dish represents the oil and organic matter present in the sample. The percentage of oil and organic matter is obtained by dividing the difference in weight by the volume of the sample in terms of cubic centimeters.

Aromatic Hydrocarbons Seldom Present in Petroleum Oils

We are interested to know what crude oils contain aromatic hydrocarbons. If you have any information on this subject we would be glad to have it. —S. E. L.

Aromatic compounds are not found as such in many petroleum oils but they may be produced as decomposition products by the pyrolysis of most fractions from petroleum. There are a few exceptional oils that do contain aromatics, the most notable are those found in Java and Borneo. Some Romanian and Galician oils are also reported to be rich in aromatic hydrocarbons.

All petroleum fractions may be converted to aromatics if heated to high temperatures, rapid decomposition usually taking place in the neighborhood of 1,200° F. Also, the treatment of petroleum distillates with nitro-sulfuric acids will produce nitro compounds. These sources of aromatics are not of commercial importance but may be of value under exceptional conditions, as when supplies are required for the manufacture of explosives in time of war.

The recent developments in the manufacture of motor gasoline by cracking under extreme temperatures, promises to yield certain aromatics at low enough cost to be available for industrial uses.

Questions of Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

"IT COULDN'T HAPPEN"

"She's Broken Every Record!"
This cartoon appeared on the front page of THE WORLD, JANUARY 26, 1890

..but it did!

IN 1872, Jules Verne published a wild tale about a fictitious character named Phileas Fogg, who traveled "Around the World in Eighty Days." The idea was too fantastic for belief, yet it was only 18 years later when this imaginary record was broken by Nellie Bly, who made the trip in "72 days, 6 hours, 10 minutes, and some seconds." But transportation progress was still more dramatically demonstrated in 1931 when Wiley Post in his famous *Winnie Mae* circled the globe in the amazing time of 8 days, 15 hours, 51 minutes.

The advance of modern science has brought about changes in industrial technique also. These improvements may have been less spectacular in the eyes of the public, but business men have found it profitable to substitute these new methods for the old-fashioned ones.

The antioxidant process of stabilizing cracked gasoline, introduced only a few years ago, has already established its superiority over the traditional acid-treating method. No longer does the refiner have to foot the bills for corroded equipment, expensive redistillation, and heavy yield losses.

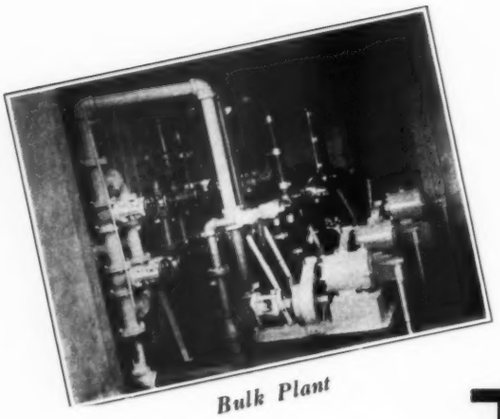
Many refiners who are using du Pont Gasoline Antioxidants have found this the surest, most profitable way to prevent gum formation and maintain color standards as well as anti-knock quality. E. I. du Pont de Nemours & Co., Inc., Organic Chemicals Department, Wilmington, Delaware.

DU PONT
GASOLINE ANTIOXIDANTS

Inhibit Gum Formation
Reduce Acid Treatments
Maintain Anti-Knock Quality
Prevent Color Loss
Increase Yields of Gasoline
Assure Stabilization
Protect Plant Equipment

DU PONT
REG. U. S. PAT. OFF.

GASOLINE ANTIOXIDANTS



Bulk Plant

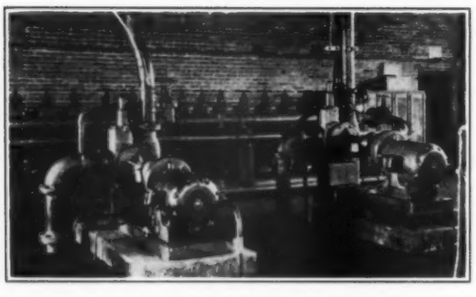
Refinery Wax House

TRANSIT
ROTARY PUMPS

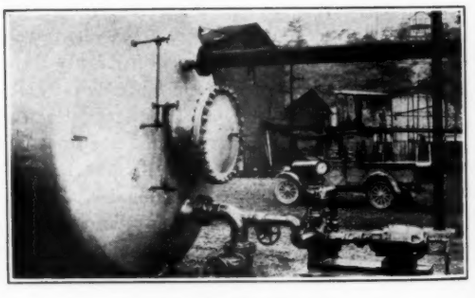
Barge and Tanker

Pipe Lines

They will do the job



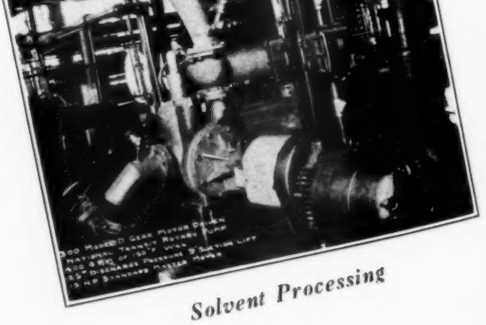
Refinery Pump House



Refluxing

Lube Oil Processing

NATIONAL TRANSIT
PUMP & MACHINE CO.
OIL CITY, PA.
HOME OFFICE AND WORKS, OIL CITY, PA.



Solvent Processing

FIELD OPERATIONS

Summarizing the Week's Developments

Five hundred and thirty-eight wells were completed in the United States during the past week, of which 397 were oil wells.

Interest along the Gulf Coast of Texas shifted to the Cotton Lake area in Chambers County and the Amelia and Nome fields in Jefferson County where scheduled production tests on important wells were to be made this week. The world's deepest oil producer, Harrison & Abercrombie and others No. 1 Armstrong Plantation, in the Old Ocean field, Brazoria County, flowed 193 barrels of distillate per day through a three-quarters-inch choke. It is bottomed at 9,963 feet in 30 feet of sand. Five more oil wells were completed in the Talco field in northeastern Texas and 29 oil wells were brought in in the East Texas field. Rains and floods failed to prevent a crop of good producers in the West Texas fields. Wildcats in three Southwest Texas counties, a showing in a San Patricio County wildcat and new work in the Flour Bluff field in Nueces County were the important events in that big territory.

OKLAHOMA

The Moore pool in Cleveland County, Oklahoma, came through with a gas and distillate well that flowed at the rate of 300,000,000 feet of wet gas per day, cutting out two master gates. The gas contained oil and distillate. In the Crescent pool, Logan County, a well making 1,000 barrels of oil per hour was developed by drilling a little deeper into the second Wilcox sand. A week ago this well was flowing 275 barrels per hour from farther up the sand body.

KANSAS

Kansas proration authorities place the potential production of that state at 1,312,312 barrels per day from 19,074 wells. Allowable production will be 155,000 barrels through October. Three oil pools and a gas field were opened in the state in the past week, the oil pools in Pawnee, Ellis and Trego Counties and the gas field in Finney County. Other prospective pool openers were reported in Russell and Barton Counties, and 13,000,000-foot gas production was reported from a non-completed well in Rush County.

ARKANSAS-LOUISIANA-TEXAS AREA

The Ark-La-Tex area also known as the Shreveport territory, had 41 new locations staked in the past week and progress was made in the safe and sane development of the Rodessa field by the appointment of a conservation officer answerable to the Louisiana Conservation Commission. Rodessa hit a new peak of production in the seven days ending September 23, when it averaged 72,236 barrels per day on both sides of the state line. Hempstead County is the most active area in Arkansas with five deep tests going down.

ROCKY MOUNTAIN FIELDS

Colorado reports a prospective new pool in Moffat County, in the northwestern part of the state, and an important dry hole in Yuma, a northeastern county. The latter drilled into granite and was abandoned at 5,595 feet. A 5,233-barrel well in the Lance Creek field, Niobrara County, Wyoming, was the best the Rocky Mountain fields offered in the week. New Mexico completions were below the average in initial production. Cut Bank was the most prolific area in Montana in the course of the week.

CALIFORNIA

The Tejon area in Kern County, California, gives indications of a new pool. A test flowing 25 barrels per hour at 4,474 feet was not yet completed.

Completions in All Fields

(Week Ending September 26, 1936)

	Oil	Gas	Dry	Total	1936 total comp. to date	1935 total comp. to date
Penna. Grade Fields	73	16	10	99	2,462	2,166
Lima Field	1	1	1	3	68	73
Central Ohio	5	4	2	11	259	247
Indiana	0	1	1	2	134	155
Illinois	2	0	1	3	26	11
Michigan	4	8	7	19	461	369
Kentucky	11	0	3	14	204	183
Kansas	38	2	6	46	1,218	924
Oklahoma	38	1	11	50	1,847	1,495
North Central Texas	20	0	8	28	1,870	1,972
West Texas	34	1	6	41	1,114	600
Texas Panhandle	6	5	0	11	490	536
East Central Texas	8	0	5	13	257	185
East Texas	29	0	3	32	1,918	3,411
East Texas border	7	0	0	7	69	8
Gulf Coast Texas	18	1	6	25	865	775
Southwest Texas	49	1	10	60	2,153	1,249
Total Texas	171	8	38	217	8,736	8,736
North Louisiana	6	7	3	16	477	232
Gulf Coast Louisiana	5	0	1	6	267	270
Total Louisiana	11	7	4	22	744	502
Arkansas	1	1	0	2	70	96
Montana	5	0	0	5	170	134
Wyoming	2	0	0	2	73	60
Colorado	0	0	1	1	21	11
New Mexico	11	0	0	11	437	241
Utah	0	0	0	0	5	6
California	24	0	7	31	905	841
Total United States	397	49	92	538	17,841	16,250
Total previous week	368	38	93	499		
Difference	29	11	1	39		

Outstanding Fields—Highlights

(Week Ending September 26, 1936)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	4	5	5	3,339	118	7,478
Hastings	4	5	1	120	97	5,893
Loma Novia	2	9	4	640	581	15,325
Seven Sisters	2	9	4	1,315	282	7,150
Saxet Heights	6	8	4	462	168	7,840
Saxet	9	25	9	1,350	218	17,670
Lopez	2	7	10	3,860	177	4,510
East Texas	29	110	29	1,062	21,413	441,884
Talco	16	30	8	1,382	67	6,974
OKLAHOMA						
Oklahoma City (capitol area)	5	17	4	8,679	146	44,055
Oklahoma City (old field)	0	0	0	0	947	99,446
Fitts	10	50	1	1,940	440	65,150
Burbank-So. Burbank	1	11	0	0	2,162	22,400
KANSAS						
Ellis County	2	32	2	1,924	52	3,079
Reno County	8	19	2	524	323	16,657
Russell County	5	38	11	16,564	474	22,406
Rice County	3	32	10	9,836	581	39,585
NEW MEXICO						
Lea County	9	84	10	1,503	424	75,200
LOUISIANA-TEXAS						
Rodessa, La.	6	33	4	2,184	283	59,110
Rodessa, Tex.	8	29	7	3,300	61	13,055
Gillis, La.	2	6	0	0	52	16,937
Tepetate, La.	2	4	2	408	30	5,709
MICHIGAN						
Porter-Yost	6	12	1	150	401	15,110
Crystal-Montcalm	6	10	0	0	410	4,315

Eastern Field Report

By STAFF CORRESPONDENT

WEST VIRGINIA YIELDS NEW ORISKANY SAND GAS WELLS

PITTSBURGH, Pa., Sept. 26.—Three Oriskany tests were completed in West Virginia during the week, two of which were very fair gas wells. In Elk district, Kanawha County, the Glen Oil & Gas Co. completed the test on the Virginia Joint Stock Land Bank lease (Morse farm) at 5,051 feet. Oriskany sand lay at 5,020-46 feet with gas at 5,032-40 feet. It gauged 724,000 feet naturally, but increased to 10,000,000 feet a day after it was shot. This test is east of the closely drilled Oriskany field along Coopers Creek and after the successful completion on the J. H. Cooper farm it appeared well within the possible field. It makes the extension of 3½ miles northeast of the G. and D. Copenhaver farm more attractive.

In this district and in territory already proven, the Columbian Carbon Co. completed the test on the Kanawha Valley Bank lease (Grant Copenhaver No. 2 farm) at 4,929 feet. Top of Oriskany sand was at 4,900 feet and it had a natural showing of 2,650,000 feet.

In Malden district, Kanawha County, United Fuel Gas Co. completed No. 4,643, Georges Creek Land & Mining Co. lease at 4,638 feet. Top of the sand was 4,620 feet. It has a showing of 100,000 feet a day before shot, which will be given it this week. In this district United Carbon Co. is drilling at 4,900 feet in its Dickinson farm test and should reach the Oriskany sand this week.

In Elk district, Sandy Elk Oil & Gas Co. is down 4,839 feet on the Perry Moles heirs farm, with top of the Corniferous lime at 4,833 feet. United Carbon Co. is drilling at 4,987 feet on the Henry C. Smith farm.

In Big Sandy district, Kanawha County, United Carbon Co. found 109 feet of Corniferous lime on the Osborne farm and reached Oriskany sand at about 5,730 feet.

Another test is nearing completion in Loudin district, Kanawha County. Columbian Carbon Co. shut down at 4,619 feet to run casing in No. 13 Kanawha City lease. Top of Corniferous lime was at 4,613 feet.

William O. Zeibold is down 4,500 feet on the Griffith and Dixon lease and at 1,270 feet on the Avilee Baldwin farm.

Columbian Carbon Co. was drilling at 3,800 feet on the R. H. Wood and others farm in Sherman district, Boone County.

In Wirt County, Godfrey L. Cabot, Inc., was at 1,750 feet on the Julia Blankenship farm in Burning Springs district. Northwest of this, Glen Roberts was drilling at 800 feet on the Roberts Oil Co. farm. In Roane County, Godfrey L. Cabot, Inc., is building a rig on the T. F. Smith farm, 879 acres, in Geary district.

SOUTHWEST PENNSYLVANIA

There were nine completions in Southwest Pennsylvania, the largest a producer in Center district, Greene County, where J. B. Orndoff, on the Mattie I. Scott farm, deepened to the second pay in the Nineveh Thirty-Foot sand. It made a flow of 100 bbls. the first 24 hours, with smaller flows the next two succeeding days. It will be drilled slightly deeper.

In Springhill Township, Greene County, All Penn Oil & Gas Co. completed No. 2 H. H. Milliken at 2,284 feet, Injun sand. It is a gas well gauging 450,000 feet a day.

In Perry Township, Greene County, Equitable Gas Co., on the Blanche Haines farm, drilled to 3,238 feet; the Gordon sand was at 2,950-70 feet, with about 17,136 feet of gas showing at 2,951 feet. In Franklin Township, Manufacturers Light & Heat Co. drilled on the A. L. Moredock farm to 2,985 feet. The Bayard sand was at 2,912-30 feet, with only 17,136 feet of gas showing at 2,915-17 feet.

On Wagon Run Road in Aleppo Township, Greene County, Cochran & Cochran completed No. 5 Nancy Riggs in Gordon sand at 3,327 feet. It is showing for 8 bbls. a day. This will start more drilling in this field. Union Gasoline & Oil Corp. will locate a second test on the W. G. and C. Miller farm, and has staked two locations on the Strope farm, one 800 feet south of No. 4, in direct line with No. 1 Moose and No. 1 Isaminger, both of which were large producers, and the other 1,000 feet east of No. 4. A local company has made a location for a test on the Miller farm and 300 feet northeast of this second location.

In Washington County, Bloom & Co. completed the second test on the Clyde Hinerman farm in South Franklin Township at a depth of 900 feet. Murphy sand was at 877 feet, with 360,000 feet of gas per day at 899 feet.

In Union Township, Washington County, Finleyville Oil & Gas Co. deepened No. 37-F E. P. Bown from 2,852 feet to 3,537 feet, Speechley sand. There was about 75,000 feet of gas at 3,503-06 feet, rock pressure 170 pounds.

In Beaver County, G. L. and L. C. Black completed a test on the Black farm in Economy Township in the Hundred Foot sand at 1,400 feet. It is showing for 2 bbls. a day.

In Butler County, Miller & Schaffer, on the Harry Miller farm in Butler Township, drilled through the Third sand to 1,725 feet. It was dry in all formations.

In Amwell Township, Washington County, the Union Gasoline & Oil Corp. are getting ready to shoot No. 3 A. O. Vankirk. Fifth sand was at 3,036 feet with an oil show at 3,053 feet, total depth 3,080 feet. On the Marion C. Johnson farm, this company is drilling at 2,025 feet, and on the Stephens B. Day farm at 2,682 feet. Fifty-Foot sand was at 2,606 feet with gas, oil and water at 2,675 feet.

In this township Carnegie Natural Gas Co. is down 1,575 feet in No. 2 R. M. Carrons and 1,155 feet in No. 2 N. B. Redd. Moore-Orill & Co. are drilling at 765 feet in No. 8 G. L. Walker. The South Penn Oil Co. is underreaming No. 3 J. Q. Zimmerman at 1,230 feet. A. V. Lewis and others have started drilling on the W. Mankey farm and have reached 1,700 feet on the W. Dodds farm. The Wise Oil & Gas Co. is building a rig for No. 2 C. W. Dunn.

In East Finley Township, Union Gasoline & Oil Corp. has started drilling No. 6 J. N. Clutter.

In Center Township, Greene County, Carnegie Natural Gas Co. is drilling at 3,214 feet on the J. W. Milliken farm and in Richhill Township is down 2,878 feet on the W. O. Kincaid farm. The Thirty-Foot sand gas was at 2,662 feet and gauged 70,000 feet, with the Gordon sand at 2,752 feet, and 119,000 feet of gas at 2,753 feet.

In Richhill Township, Greene County, Smith McCracken is drilling at 1,900 feet on the Homer King test. In Greene Township, Peoples Natural Gas Co. found no increase in gas after deepening to the Injun sand at 2,322 feet in No. 1,286 D. E. Tennant. In Wayne Township, H. D. Freeland & Co. are at 735 feet on the D. L. Freeland farm. In Aleppo Township, the Dunn Mar Oil & Gas Co. is deepening No. 2 Ullom Brothers, and drilling at 3,281 feet.

Deep Tests

The Summit well of William Snee and others on the Summit Hotel property in South Union Township, Fayette County, and on Chestnut Ridge, has made some progress in cleaning out the hole, but the work is slow. The spiral tools and bit have reached 4,385 feet, drilling in a hard cave.

In Slippery Rock Township, Lawrence County, Carnegie Natural Gas Co. is drilling at 485 feet in a deep test on the Heichel farm. Fair progress is noted in the test of Wittmer-Phillips on the Paul Fanker farm, 1 mile north of Zelienople, Butler County, and on the Laughner-Wittmer test on the William Wilsman farm in Independence Township, Beaver County.

SOUTHEAST OHIO

In Athens County, A. D. Townsend and others completed a gas well on the Fred Carsey farm near Jerseyville in section 17, Lodi Township, in Second Berea sand at 1,650 feet. It gauged 330,000 feet a day. Near Fisher, in section 20, Alexander Township, the Moore Farm Oil & Gas Co. completed a test on the A. Variety farm in the Berea sand at 1,090 feet, gauging 30,000 feet a day.

In Coshocton County, H. S. Perkins completed a gasser on the W. W. Smith farm in section 9, Liverton Township, in Clinton sand at 3,175 feet. It gauged 350,000 feet a day. A small oil showing was packed off.

In Knox County, Ohio Fuel Gas Co. completed a second test on the R. D. Goffen farm in section 14, Butler Township, in Clinton sand as a gas well gauging 500,000 feet a day. In the SE quarter of section 22, Union Township, Knox Exploration Co., on the Walter Busenberg farm, drilled through Clinton sand to 2,945 feet. It was a dry hole. In Pike Township, J. B. Reed, on the George W. Robinson farm, drilled through Clinton sand to 2,656 feet, then plugged back to Berea sand at 696 feet, where it is a gas well gauging 53,000 feet.

In Medina County, Curtis & Eaken completed No. 13 Harriet Broadsword, Tract 16, Lot 21, Chatham Township, in Berea grit at 417 feet. It produced 2 bbls. the first day after shot.

In Muskingum County, two outside tests were dry. Ohio Fuel Supply Co., on the Luella M. Shaw farm, Lot 18, Cass Township, drilled through the Clinton sand to 3,420 feet and Ohio Fuel Gas Co. on the J. F. Shaw farm, Lot 8, Jackson Township, drilled through Clinton to 3,493 feet.

In Noble County, C. W. Rich and others completed a gas well on the S. W. Finley farm, NE quarter section 13, Buffalo Township, in Big Injun sand at 950 feet. It gauged 225,000 feet a day, with a rock pressure of 135 pounds.

In Perry County, the Kachelmacher Estate drilled No. 14 Hemlock Coal Co. tract in section 25, Coal Township, through Clinton sand to 3,710 feet. It was dry.

In Vinton County, Kelch Oil & Gas Co. completed a small oil well on the Backus farm near New Plymouth in section 35, Brown Township, in Berea sand at 844 feet.

In Washington County, Henry Oil & Gas Co., on the Thomas B. Mendenhall farm on Sackett Run in section 27, Ludlow Township, drilled through the Berea grit to 1,834 feet. It was dry.

WEST VIRGINIA

In Braxton County, West Virginia, the test of the Pittsburgh & West Virginia Gas Co., reported as a 10-bbl. well a week ago on the W. A. Ramsey farm, Birch district, is now rated good for 35 bbls. a day from the Injun sand at 2,000 feet.

In Calhoun County, the Richter Oil Co. completed No. 3 Emily McCray, Sheridan district, in Salt sand at 1,773 feet. It is good for 8 bbls. daily.

(Continued on Page 80)

California Field Report

By
L. P. STOCKMAN

TEJON AREA, KERN COUNTY, GIVES PROMISE OF NEW POOL

LOS ANGELES, Calif., Sept. 28.—Reserve Oil & Gas Co. appears to be on the verge of discovering an oil field in the Tejon area of Kern County. The company's No. 33-2, second well drilled in this area, flowed for a short time at the rate of 25 bbls. per hour from 4,474 feet. It ran into bottom water at 4,518 feet and was plugged back to 4,474 feet, and the hole finished with a 6⅝-inch liner carrying 30 feet of perforated. Mechanical trouble prevented a satisfactory completion but this will be overcome sooner or later. Reserve Oil & Gas Co.'s initial test in the Tejon area showed indications of oil and gas but failed because of water and an insufficient amount of oil sand.

Western Gulf Oil Co. cemented 200 feet of blank liner in No. 3 S.P., a wildcat in the Cantua district of Fresno County in section 3-17-15, preparatory to an early production test, and it will be perforated within a few days. The hole is open between 1,198 feet and the top of the liner at 8327 feet. No. 3 S.P. has been bottomed at 8,527 feet, with Domengine formation of Eocene age topped at 8,460 feet. This is the third test in the Cantua area by the Western Gulf and is one of the few tight wells in California, although gas pressure has caused considerable inconvenience. The Gulf's field department is of the opinion that No. 3 S.P. is capable of producing approximately 300 bbls. per day from a point above the present bottom of the hole. Apex of the Cantua structure, based on careful correlation work, is located northwest of work conducted by the Western Gulf up to the present time. Mohawk Petroleum Co. recently acquired several hundred acres of potential oil land northwest of the Gulf's present wildcat and tentative plans call for the initiation of drilling operations within the next 30 days.

Gato Ridge

Petrol Corp. and Golconda Petroleum Corp. have announced completion of negotiations for immediate development of the latter's 1,600-acre property in the Gato Ridge field of Santa Barbara County. The possible importance of this property was evidenced by completion of the Barnsdall Oil Co. No. 1 Tognazzini about four years ago. Since this time, the Golconda Petroleum Corp.'s property and holdings of the Barnsdall and Rio Grande have been considered one of the largest heavy oil reserves remaining undeveloped in California. The Barnsdall's discovery well showed an initial production of 1,700 bbls. but has been permitted to produce only a small part of its potentiality. Dr. Eric A. Starke estimated that 1,608 acres of the Golconda Petroleum Corp.'s holdings would be found productive and that the ultimate production per acre would closely approximate 40,000 bbls. On this basis the 1,608 acres could ultimately be expected to produce a total of 63,285,000 bbls. of crude oil. Umberto Young calculated the productive acreage as 1,384 acres and on the basis of 50,000 bbls. per acre could be expected to produce an ultimate production of 69,200,000 bbls. of crude oil. Raymond S. Vlatchley fixed the potentially productive acreage as 1,000 acres and estimated that the ultimate recovery per acre would approximate 25,845 bbls. or a total ultimate recovery of 25,845,000 bbls. The latter's report states, however, that the acreage recovery might approximate 50,000 bbls. per acre. The Petrol Corp. paid approximately $100,000 for a lease on this property and preparations have already been started for a well to be drilled in section 9-8-32. This location is approximately 950 feet southeast of the Barnsdall Oil Co. No. 1 Tognazzini and is therefore located in territory practically proved up for production.

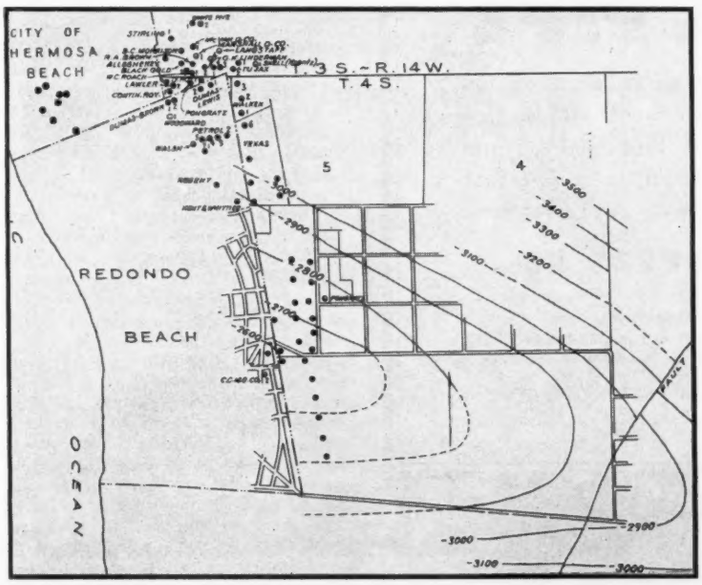
Associated Oil Co., which recently discovered two productive horizons out on the northwest tip of the Lost Hills field of Kern County, has staked location for two additional wells and early development is anticipated. Associated's new wells are Nos. 6-K-3 in section 2-26-20 and No. 12-A-3 in section 11-26-20. The Associated No. 1 Taylor, in section 1-26-20, failed to encounter the shallow zones discovered in wells on the Williams property and is at the present time rotating ahead in a hard sandy shale at 4,502 feet. Lincoln Petroleum Co. is rigging up No. 2 Theta in this field and will carry the hole down to the third zone expected to be picked up at 1,700 feet. This new well is located in section 12-26-20 and will be spudded in within the next few days. The Texas Co. has completed the rig for No. 1 Theta, which will be drilled in section 11-26-20 as an offset to holdings of Associated Oil Co. If these preliminary wells prove to be commercially productive we may anticipate additional drilling as these relatively shallow wells can be finished at small cost and in a short period of time. A 500-bbl. well at 1,700 feet is a good investment in any field and will prove quite a stimulant.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	September 13		September 6			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	114,862	16,409	152,018	21,717	4,897,525	5,661,316
Kerosene	.....	.....	.....	.....	888,702	753,457
Foreign exports:						
Crude oil	520,175	74,311	.....	.....	7,005,122	9,560,955
Fuel oil	239,450	34,207	245,048	35,007	7,260,344	8,715,681
Diesel and gas oil	87,547	12,507	153,581	21,940	4,208,019	3,299,583
Gasoline	70,972	10,139	171,407	24,487	5,154,243	4,771,931
Kerosene	44,733	6,390	1,023	146	1,088,281	956,477
Other unfinished oil	.....	.....	.....	.....	132,908	99,847
Coastwise-domestic:						
Crude oil	114,681	16,383	198,039	28,291	4,731,712	4,249,134
Fuel oil	64,957	9,280	164,653	23,522	7,084,926	7,091,294
Diesel and gas oil	.....	.....	13,017	1,860	867,958	675,801
Gasoline	195,241	27,892	267,668	38,238	9,129,349	8,104,141
Kerosene	.....	.....	837	120	138,814	142,842

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	158,152
Gasoline	.....	.....	.....	.....	227,419	.....
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	69,134	9,876	.....	.....	207,231	420,414
Lubricants	.....	.....	.....	.....	38,131	45,620
Foreign exports:						
Crude oil	97,247	13,892	.....	.....	2,325,466	1,838,964
Fuel oil	38,765	5,538	20,196	2,885	1,990,942	1,673,594
Diesel and gas oil	47,441	6,777	.....	.....	1,382,311	855,891
Gasoline	334,896	47,842	.....	.....	2,760,325	2,113,509
Kerosene	4,016	574	13,080	1,869	546,419	597,608
Lubricants	21,867	3,124	2,247	321	268,440	155,238
Other unfinished oil	.....	.....	.....	.....	90,923	.....
Coastwise-domestic:						
Fuel oil	78,509	11,216	88,319	12,617	4,745,740	4,815,918
Diesel and gas oil	34,542	4,935	.....	.....	515,382	175,932
Gasoline	162,187	23,170	110,651	15,807	3,632,404	3,169,791
Kerosene	20,471	2,924	18,311	2,616	141,580	74,003



Map showing location of recent completions in Redondo section of Torrance field

Ten Section

Shell Oil Co. has reached a depth of 8,404 feet in No. 6 K.C.L. in the Stevens or Ten-Section field of Kern County and at this depth has cored 641 feet of oil sand. The pay was topped at 7,763 feet and the oil sand shows a good saturation. The well is expected to register substantial production and the outcome will be watched with interest as many are anxious to find out whether the second well will show as high gravity oil as the discovery well. Shell's first well in this field took a limited penetration and the high gravity of the oil produced may be more of a condensate than a normal oil. The second well now drilling should determine this when given a production test some time within the next fortnight. A 9⅝-inch water string was landed and cemented at 7,760 feet and the company will only be required to run in and land a liner and a string of tubing before completing. Standard Oil Co. No. 10-1 K.C.L. located in this field in section 20-20-26 is nearing the depth at which the pay should be reached and consequently will bear watching. Standard No. 10-1 K.C.L. is located almost due north of Shell's discovery well which is located in section 29-20-26. Southeast of Shell Oil Co.'s discovery well, Standard is rigging up rotary drilling equipment for a new test to be drilled in section 34-30-26 and an early spud is expected to be made. Ohio Oil Co. has erected a rig for a test to be drilled south and a little east of Shell's discovery in the Ten Section field and drilling equipment

is expected to be hauled in shortly. Ohio's new test is located in section 4-31-26, about 2 miles south of Shell's K.C.L. lease.

In the Kettleman North Dome field Shell Oil Co. recompleted No. 1 Dixon after redrilling the hole to 7,918 feet, and returned it to production flowing 154 bbls. of clean 35.1 gravity oil and 1,094,000 feet of gas per day. This well went to water several months ago and the company accordingly killed the flow and undertook the necessary remedial work. No. 1 Dixon was originally bottomed at 8,807 feet. Kettleman North Dome Association No. 81-24-H in section 24-21-16 was brought in on a compressor doing 480 bbls. per day from 8,895 feet but is expected to build up after being on production for a few days. Kenda's next completion in this field is scheduled to be No. 38-18-J in section 18-21-17 as a 4¾-inch liner is at present being run in the hole. No. 21-30-J in section 30-21-17 is also expected to be given an early production test as drilling operations have been concluded.

San Miguelito

Continental Oil Co. has completed No. 5 Grubb in the San Miguelito field of Ventura County and got an exceptionally good producer. This well was brought in flowing 1,499 bbls. of clean 30.1 gravity oil per day from 7,040 feet. Previous to being completed No. 5 Grubb blew in flowing through drill pipe while the crew was making a water shut-off test on the 9-inch landed and cemented at 5,955 feet. Shell Oil Co. is gradually extending the western limits of production in the Ventura Avenue field and Continental Oil Co. is extending the eastern limits of the San Miguelito field and if both continue to do so these two fields may ultimately come together. No. 5 Grubb of Continental Oil Co., finished this week, is located approximately 3,000 feet east of the nearest producing well in the San Miguelito field and Shell is at present drilling ahead in No. 88 Taylor in an oil sand at 6,728 feet. The latter well is located in the extreme western end of the Ventura Avenue field. This trend of drilling revives the question which has prevailed among many oil men as to whether Ventura Avenue and San Miguelito are not in reality one field instead of two as has been tentatively decided. Associated Oil Co. is starting two wells on the Lloyd lease in the Ventura Avenue field and General Petroleum Corp. is rigging up for another projected deep test on the Barnard lease.

Out in the west front of the Kern River field Republic Petroleum has completed No. 11 Strassburger pumping 280 bbls. of relatively clean 14.8 gravity oil per day and Associated Oil Co. has finished No. 31 in section 23-28-27 pumping 95 bbls. of 15.2 gravity oil daily from 1,934 feet. In the Midway-Sunset field General Petroleum Corp. No. 32-5 in section 32-32-24 has been completed pumping 170 bbls. of 19.3 gravity oil cutting 10 per cent daily from 3,075 feet after the hole had been plugged back from 3,180 feet. Quality Oil Co. No. 3 Bull in this field was an exceptionally good completion as it was brought in on the beam pumping 540 bbls. of 16.8 gravity oil per day from 2,150 feet after the hole had been finished with a 6⅝-inch liner including 640 feet of perforated. Standard Oil Co. No. 18 Monarch, in section 26-12-24, was good for 160 bbls. of relatively clean 22.9 gravity oil per day from 2,638 feet. Hugh B. Evans has cored the top of the productive oil zone in his No. 11 in section 35-32-23 at 2,110 feet and has cemented an 8⅝-inch water string at 2,057 feet with the bottom of the hole at 2,330 feet. This well should be the next completion listed in the Midway-Sunset field.

Torrance

Four new wells were completed in the Redondo section of the Torrance field this week and while none of this quartet registered substantial production they were all commercially productive. Walken Oil Co. No. 3 Redondo was good for 168 bbls. of 18.1 gravity oil per day from 3,708 feet. The Petrol Corp. No. 5 Redondo was brought in on the beam pumping 140 bbls. of relatively clean 17.6 gravity oil per day from 3,555 feet after the hole had been finished with a 6⅝-inch liner carrying 437 feet of perforated. Linderman Oil Corp. No. 3 Redondo was good for 117 bbls. of 16.5 gravity oil per day from 3,777 feet. This new well was finished with a 5⅝-inch liner including 401 feet of perforated and current production is showing a water cut of 7 per cent which is somewhat below the average cut for wells in this section of the field. No. 1 Vaccaro drilled by Gus Pongratz was brought in pumping 90 bbls. of 16.1 gravity oil cutting 8 per cent daily from 3,333 feet after the hole had been plugged back from 3,452 feet because of bottom water.

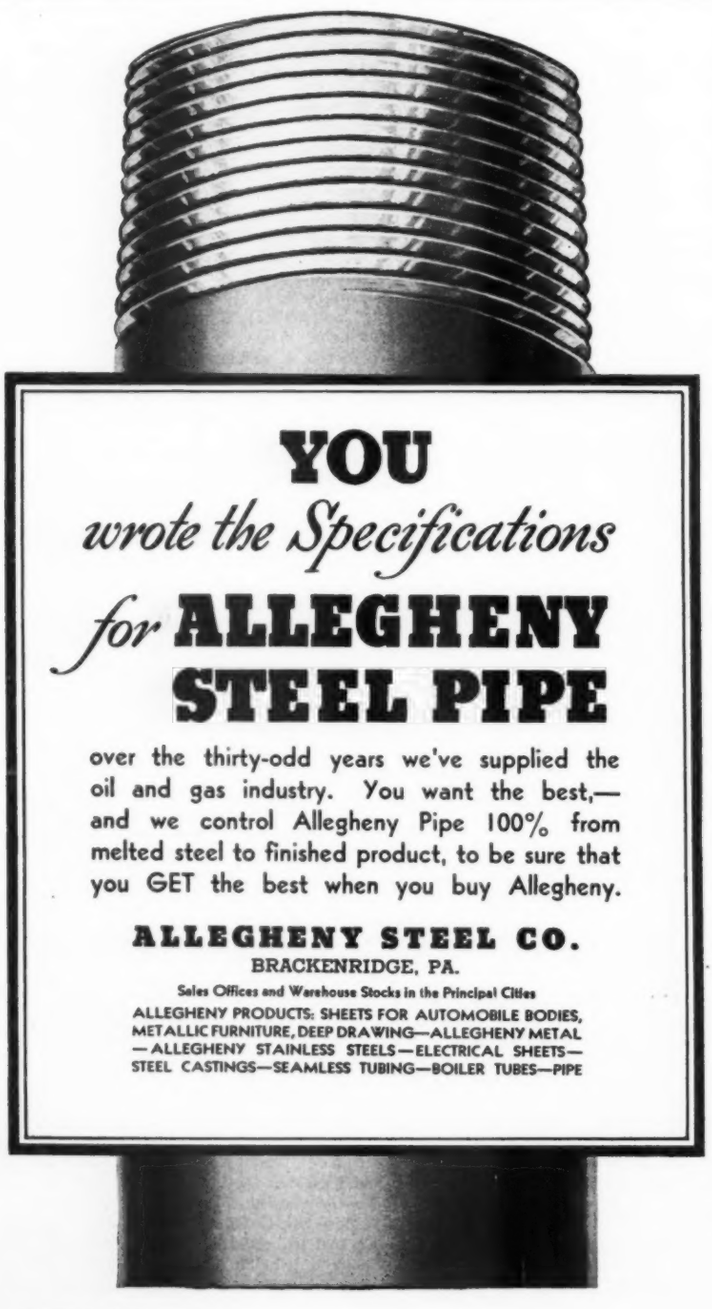
In the Mount Poso field of Kern County, Shell Oil Co. No. 28 Vedder has been completed pumping 284 bbls. of clean 16.8 gravity oil daily from 1,860 feet after the hole had been finished with a 6⅝-inch liner carrying 198 feet of perforated. No. 29 Vedder has just been completed but no accurate gauge is available as it has only been on production for three hours. It should be good for about 250 bbls. per day judging by the last hour's flow. Union Oil Co. should make a production test on No. 1-B Tribe in this field within another day or so and the outlook is rather bright for commercial production. This well is an outpost and if it results in commercial production it will lead to the drilling of several more on this and other adjacent property. In the Round Mountain field, Shell Oil Co. has completed No. 10 Caldwell pumping 227 bbls. of clean 18.1 gravity oil per day from 1,515 feet after the hole had been finished with a 6⅝-inch perforated liner and a string of 2½-inch tubing.

Long Beach

Shell Oil Co. got a pleasant surprise in the Long Beach field a few days ago when No. 8 Cherry Hill was swabbed in flowing 1,498 bbls. of clean 27.6 gravity oil daily after the hole had been plugged back from 6,636 feet to 2,930 feet and the casing perforated at 2,880-82 and at 2,925-27 feet. In addition to the oil the well produced 441,000 feet of gas. No. 8 Cherry Hill died yesterday and the company is at present cleaning out the hole preparatory to returning it to production. The showing of this well is expected to lead to further work along this line by other operators. Shell did not pick up any new sand in this well as several up on top of the hill have been producing from the same horizon for several years. That it still has sufficient kick to result in completion of a natural flowing well is due to the fact that in the rush for deeper and more prolific production this zone was passed up by a number of operators. In the Montebello field, Standard Oil Co. completed No. 88 Baldwin and this new well was brought in pumping 202 bbls. per day from 3,000 feet. The Texas Co. No. 14 Baldwin in the Montebello extension was completed a few days ago and was brought in flowing 1,420 bbls. of relatively clean 30.1 gravity oil daily from 5,679 feet. In addition the well is producing 2,400,000 feet of gas per day.

No. 8 Carson of the Union Oil Co. in the Dominguez field has been completed flowing 352 bbls. of 32.8 gravity oil daily from 7,346 feet. Production has not yet steadied down and the well may therefore show a larger output after several days of production. In the Puente district, the Melbourne-Chino Oil Co. No. 1 Abacherle was finished pumping 130 bbls. of relatively clean 22.9 gravity oil per day from 2,233 feet. Successful completion of this well has prompted the company to stake location for a second test to be drilled at once. In the Wilmington area, Sovereign Oil Co. has completed No. 1 Advance Truck and this new well was brought in pumping 148 bbls. daily from 3,689 feet. Mohawk Oil Co. added a new well to its list of producers in the Fruitvale field a few days ago when No. 23-3 was brought in pumping 170 bbls. of 22.1 gravity oil daily from 3,133 feet. In the Edison field of Kern County Buffalo Oil Co. has completed No. 2 Wildman, but it was good for only 25 bbls. of 14.6 gravity oil per day from 797 feet.

Harry J. Gabel, of Muskegon, Mich., field superintendent for the American-Michigan Pipe Line Co. for two years and former superintendent of the Muskegon Gas Co.'s manufacturing plant, has been named field superintendent of the American Production Co., a new subsidiary of the American Light & Traction Co. He will direct all central Michigan gas operations for the two Muskegon companies and for the Grand Rapids Gas Light Co. in the new position with headquarters at Edmore and residence at Alma, Mich.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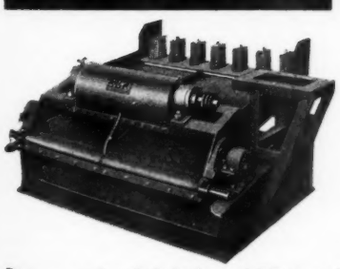

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Edwards Drilling Co. completed Kenben Oil Co. No. 2 Maco Stewart at the Dickinson field; is coring below 7,096 feet on a wildcat in Hidalgo County for the Pentano Production Co. and has rigged up at the Sour Lake field for a Cockfield test to be drilled for the Kirby and Woodley Petroleum Co.

Ben (Bud) Coyle completed No. 5 Banta at Jeanerette for the Herton Oil Co. and has rigged up No. 2 Carter. He is preparing to sidetrack No. 1 Barrileau for the same company. To the west at Charenton, Coyle is rigging up for No. 1 State located in the center of Bayou Teche which will be drilled for Mike Hogg and others.

Glenn H. McCarthy is preparing to perforate and test his No. 2-A Longe at the Amelia field; has cemented 5½-inch casing at 6,350 feet preparatory to testing his No. 3 Kilgore located at the Cotton Lake field and has two rigs running at the Anahuac field for Humble Oil & Refining Co

W. H. Harrison made a squeeze-out cement job from 5,535-37 feet in No. 1 H. C. Cockburn, the discovery well of the Magnet field in Wharton County which was drilled by the Texas Crusader Co. and has cemented 10¾-inch surface casing at 975 feet for the same company's No. 1 Hawes and Neal located a few miles to the north in the Lane City area. Three other rigs are located in the field waiting on the outcome of a second completion test of the discovery well.

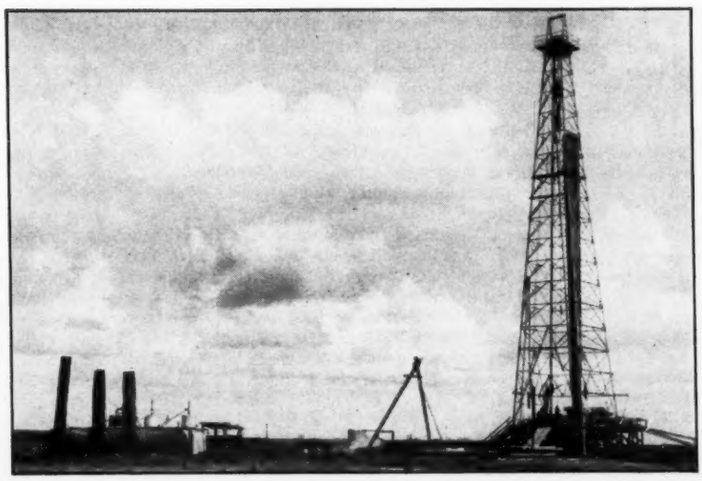
Rutherford Drilling Co. completed two wells and has a third well on the sand for Skelly Oil Co. in the Van Vleck field in Matagorda County. No. 10-B Cobb flowed 628 bbls. through perforation from 7,480-88 feet and No. 2 Metzger flowed 215 bbls. in 22 hours from sand at 8,255-62 feet. No. 9-B Cobb cored sand at 8,263-73 feet and is running 5½-inch liner to bottom at 8,291 feet.

Smith & McDannald have abandoned the Tide Water Oil Co. wildcat in Orange County at 7,867 feet and are moving in a rig to the Dickinson field for No. 1 Shelor, which will be drilled for Pure Oil Co.; two rigs are being moved to the South Houston field for Stanolind Oil & Gas Co.; one to the Sorrento dome for Pan American Production Co. and one to Liberty County for Smith & McDannald No. 1 Moore, a wildcat. Three other rotaries are located as follows: One at Louise for Pure Oil Co.; one at Dickinson for Pan American Production Co. and one at the Long Lake field for Tide Water Oil Co.

Rowan Drilling Co. completed No. 1 Carpenter in the Fairbanks field in Harris County for Amerada Petroleum Co. and Stanolind Oil & Gas Co. It is an east offset to the discovery well and it flowed 151 bbls. in 24 hours through perforated casing from 6,831-34 feet. Two wildcats are being drilled in Plaquemines Parish and Refugio County for the Tide Water Oil Co. and two rotaries are located in the Sinton field for the Centennial Oil Co.

Nichlos Drilling Co. is waiting on cement to set at 3,327 feet after plugging back No. 1 Garland for the Pan American Production Co. at the Port Barre field; No. 6-A Homeseekers Development Co. located at the Tepetate field has been completed for the Continental Oil Co. and No. 2 P. W. Miller being drilled for the same company is drilling below 7,300 feet.

Al Buchanan, drilling contractor of San Antonio, has rigs active in a number of Gulf Coast and Southwest Texas counties. Besides field drilling in the Plymouth field for Plymouth Oil Co., in Loma Novia for Duval Oil Corp. and Loma Vista for Shell Petroleum Corp., Buchanan rigs are drilling in several wildcat locations. No. 1 Welder, being drilled for Benedum & Trees in Refugio County, has progressed to 7,344 feet. This wildcat in the Friedline Pasture area has had several production shows and is at present nearly 400 feet below contract depth. Other important wildcat tests being drilled by Buchanan include Shell Petroleum Corp. No. 1 Taylor in Duval County and a new Humble test on the Garza ranch in the same county.



Discovery well of the Maanet field, Wharton County, which was drilled by W. H. Harrison Drilling Co., Inc.

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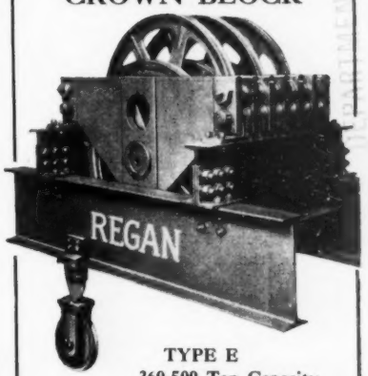

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THE UNIVERSITY OF NEBRASK

Michigan Field Report

By
PAUL A. ELLIOTT

EIGHT NEW GAS WELLS FLOW 231,124,000 CUBIC FT. PER DAY

MUSKEGON, Mich., Sept. 28.—Development of a 116,000,000-cubic foot open-flow of gas was accomplished by deepening a former 27,000,000-foot gasser in the Belvidere Township section of the Tri-Townships gas field in the past week.

Completion of two large gassers Saturday, one in Tri-Townships and the other in the Gratiot County field, boosted Michigan's total new gas production for the week to 231,124,000 feet per day of open flow, a new high point for several months.

New wells were Gordon Oil Co. No. 2 Roberts, C SW SE section 32-13n-7w, Millbrook Township, Mecosta County, which gauged 30,848,000 feet in Michigan Stray sands topped at 1,289 feet and drilled to 1,314 feet, and Wiser Oil Co. No. 2 S. S. Smith, C SW SE section 3-10n-4w, New Haven, Gratiot County, flowing 23,700,000 feet from Michigan Stray sands topped at 940 feet and drilled to 972 feet.

Eight new gassers aggregated 142,124,000 feet and one deepened added 89,000,000 feet open flow.

A flood of salt water dashed hopes in seven oil tests, six of which were in wildcat territory.

A ray of hope was seen in a show of oil in a second test in the newly-discovered prospective Dundee oil field in Buckeye Township, Gladwin County, while a wildcat test in Beaverton Township, same county, swabbed 74 bbls. from the Dundee after being allowed to set several days.

Only four small oil producers with an aggregate initial of less than 300 bbls. were completed in as many proved fields, while six new gassers had a combined open-flow capacity of 87,576,000 feet daily in four proved areas.

Price Increase

Defying other purchasers, who on September 16 cut the posted price of central Michigan crudes 10 cents a barrel, the Old Dutch Refining Co. Saturday announced an increase of 5 cents a barrel above the new posted price of $1.32 for Crystal-Montcalm crude. The new price of $1.37 a barrel went into effect at 7 a.m. Monday, September 28.

Oil Prospects

Prospects of commercial production in a second test in the Buckeye Township, Gladwin County area, were seen when C. L. Maguire's No. 1 Haven, SW SW SW section 25-18n-1w, struck a show of oil about 100 feet in the Dundee.

Goll, Graves and Mechling also swabbed 74 bbls. from their No. 1 Crigano, SE SE NE section 36-17n-2w, Beaverton Township, Gladwin County wildcat, and were planning to treat it with acid as the possible discovery of a new central Michigan field.

M. F. Whitehill also struck a Dundee show in his No. 1 Spicer, NW SE NW section 2, Beaverton, and was to treat it with acid before completion in the original Beaverton pool.

Half a dozen other tests were drilling in several townships of the county with a new location made in section 33 of Hay Township where one of the more recent extension tests had been started.

Midland County

The Brehm-Hollman-Skinner No. 1 McCormick test, NE NE SW section 20-15n-2w, Geneva Township, Midland County Dundee producer which made 54 bbls. during the first hour after acid treatment two weeks ago, last week settled down to 30 bbls. a day on the pump but was to be treated again. It is 3,649 feet deep.

Pure Oil Co. completed its No. 10 Bond-Root, C N SW NW section 2-13n-2w, Jasper Township, for 150 bbls. daily in the Dundee at a total depth of 3,444 feet as the largest new oil producer in the state.

C. L. Maguire and T. F. Caldwell reported 35 bbls. an hour for two hours after acid treatment of their No. 4 Hoyt, SW SE SW section 18-13n-1w, Porter Township, Midland County, a previous completion at 3,431 feet.

Pure No. 4 Iva E. Bond, C S NE SW section 1, Jasper Township, was dry and abandoned at 3,457 feet, the one duster in proved territory last week.

Pure No. 9 Bond-Root, C N SW NW section 3, Jasper, was plugged back from 3,466 feet and treated with acid but no report of production was available.

Isabella County

Roach-Lyon Corp. developed a flow of 80 bbls. daily in the No. 2 Varney, SE SE SW section 34-15n-3w, Denver Township, Isabella County, after treating with acid at 3,618 feet.

Leaton Oil & Gas Co. also struck a show in the Dundee and was preparing to acidize the No. 1 Wezensky, SW SW NE section 30-13n-3w, Denver Township, at 3,655 feet.

J. C. Aber was forced to abandon the No. 1 John Murphy, NW NW SW section 12-14n-5w, Deerfield Township, Isabella County wildcat test after losing three strings of tools in the hole in the Marshall formation.

Fifteen other tests were active in six Isabella townships where there has been a revival of drilling activities recently.

Crystal Field

No completions were recorded in the Crystal field of Montcalm County, where several wells were delayed by water troubles in the Dundee.

Rex Oil & Gas Co. encountered water trouble in No. 1 Fisher, SW SE SE section 36-11n-5w, Ferris Township, after it flowed 55 bbls. during the first half hour and 115 bbls. during the first 24 hours at 3,189 feet the week before.

Daily Crude Oil Co. also found its No. 3 Jay Fulford, NE NW SW section 36, same township, flooded with water at 3,198 feet and cemented the bottom of the hole in an attempt to restore it to production. It made 66 bbls. naturally in Dundee from 3,212 to 3,216 feet.

Max Pray's No. 1 William Strait, SW NW NW section 3-10n-5w, Crystal Township, had been plugged back about 3 feet from a total depth of 3,208 feet and treated with acid, filling up several hundred feet with oil when water broke in. It will be cemented and treated again in Dundee from 3,199 to 3,208 feet.

Michigan Oil Exploration Co. also was trying to complete the No. 1 Klees, SW NW NW section 36, Ferris Township, as a Dundee producer.

Two Montcalm County wildcats were scheduled to be completed as "dusters," namely: Jetter Development Co. No. 1 Middleton, NW NE NE section 12-9n-6w, Bushnell Township, another failure in the Vickeryville area, and Keith B. Montigel No. 1 Doctor Loree, NE SW NW section 18-9n-5w, Bloomer Township, 2 miles south of the one producer in the Vickeryville "field." The latter originally made some oil in the Traverse but failed to develop commercially in the Dundee.

Ogemaw County

Though drilling had been completed in the Dundee in six Ogemaw County tests last week, daily production records were not yet available on any of them. All are expected to make small commercial wells.

Three of the new wells were in Ogemaw Township. J. W. Leonard, Jr., placed the No. 4 Heintz Estate, SW NW NE section 24-22n-1e, on the pump after acid treatment for two streaks of oil pay in the Dundee topped at 2,665 feet and drilled to 2,819 feet.

McClanahan Oil Co. also had completed the No. 4 Heintz on an adjoining lease, NE NW NE same section, in which three pays were found between 2,651 feet, top of the Dundee, and 2,810 feet, where drilling was suspended.

Morris-Barnes Oil & Gas Corp. shot the No. 5 Golf Course, NE SW SE section 20-22n-2e, West Branch Township, and was preparing to place it on the pump.

W. J. Bernier also was ready to shoot his No. 1 Joseph Izworski, NE NE NE section 23-22n-1e, Ogemaw Township, for apparent success in the Dundee.

Sun Oil Co. was still working to complete the No. 4 State, NE SW NE section 1-21n-2e, Horton Township, same county, and Weber Oil Co. was still testing the No. 1 Fisher, NE SW NW section 35, West Branch Township.

The chief new development in the county was a flow of 300,000 feet of gas from the Muskegon Development Co. No. 3 Garnett, NW SE SW section 28, West Branch Township, on the same lease with a 700,000-foot natural gasser later increased to 2,000,000 feet with acid.

Saginaw County

Lewis Burr brought in his No. 1 Susan Palmer, NE NE NW section 19-10n-4e, Birch Run Township, for an output of 25 bbls. a day from the Berea. It was the first completion in several weeks in Saginaw County and extended the Birch Run field about three-fourths of a mile northwest.

Of the 24 producers in the field, two are in section 21 and the rest in section 20. Northwest activity is anticipated as a result of this well.

Gassers

An unofficial gauge of D. F. Jones No. 2 Wilson well, C NE NE section 9-12n-7w, Belvidere Township, Montcalm County, credited it with an open flow capacity of 116,000,000 feet a day, the greatest of any gasser east of the Mississippi River.

Deepened 16 feet from original completion at 1,282 feet, the No. 2 Wilson was increased 89,000,000 feet daily from an original open flow of 27,000,000 feet when first drilled into the Michigan Stray sands last February.

If the critical flow gauge to be taken this week proves the flow as high or higher than the unofficial gauge, it will exceed Michigan's previous record flow of 112,000,000 feet daily recently recorded in the Woods well.

First of six new gassers completed during the past week was Taggart Brothers No. 23 on the Oscar Schuberg lease, C NW NE section 4-14n-9w, in the Austin Township, Mecosta County field, which gauged 15,000,000 feet daily in the Michigan Stray sands.

Two new gassers were completed in the New Haven Township, Gratiot County field. Massigan Gas Corp. struck a flow of 13,636,000 feet daily in the No. 5 Shaver, C SE SW section 4-10n-4w, topping the Michigan Stray at 973 feet, striking the gas sands at 975 feet and drilling to 1,017 feet.

Tri-Townships Field

Largest of the six new gassers was completed in Belvidere Township, Montcalm County, when

(Continued on Page 80)

Kansas Developments

By
DAL DALRYMPLE

NINE WILDCATS OPEN POOLS IN KANSAS; POTENTIALS UP

Kansas potential production soared to a new all-time high the past week, the 19,074 wells of the state being given a total potential rating of 1,312,312 bbls. daily, according to T. A. Morgan, conservation director for the Kansas Corporation Commission. Previously, the state potential was 1,167,835 bbls. daily, as of August 30. Allowable production will be 155,000 bbls. daily, effective October 1, it was announced.

The opening of new pools, extension of older fields and discovery of new producing horizons in older areas continued to feature field operations. Four wildcat pool openers officially were completed. These included the Simpson Oil Co. and others No. 1 Gates in Pawnee County; Vickers Petroleum Co. No. 1 Kraus in Ellis County; Central Commercial Oil Co. No. 1 Wagg in Trego County, all oil wells, and Helmerich & Payne and others No. 1 Jones, gas well in Finney County.

Bridgeport Machine Co. No. 1 Ubert, NE NE NW section 12-13-18w, Ellis County, loomed as a new pool opener. Oil rose 650 feet in the hole in 24 hours from pay at 3,630-37 feet. Bradley Oil Co. and John R. LeBosquet No. 1 Penney-Wann, SE cor. section 13-15-20w, has opened the twelfth pool in Ellis County, scene of an aggressive wildcatting campaign during the past year. Oil rose 600 feet in the hole in 30 minutes from pay at 3,653-57 feet and was standing 1,150 feet in the hole in three and one-half hours. It was estimated good for 400 to 600 bbls. daily natural.

In Russell County, Braden & McClure opened a pool at No. 1 Herbel, NE NE NW section 35-14-14w. It made a potential of 220 bbls. of oil in 24 hours from Gorham sand at 3,165-68 feet, but had not been completed. In Barton County, G. H. Rose & W. H. Lant No. 1 Redetzke, NE NW NW section 10-16-11w, wildcat, had production estimated at 4 bbls. of oil an hour from Siliceous lime at 3,326-30 feet. Another Russell County wildcat showing as a pool opener was Coralena Oil Co. No. 1 L. A. Sellens, NW cor. section 17-15-13w, which had 1,400 feet of oil standing in the hole from Topeka lime pay at 2,790-2,800 feet. It is the second test to find Topeka lime production in that section. In Rush County, Joe Aylward and others found a new gas pay in the Otis field at No. 1 Riedel, C NE section 13-18-16w. It was estimated good for 13,000,000 feet of gas from pay at 2,388-98 feet in porous lime. Gas pay in the field normally is found at around 3,600 feet in Reagan sand.

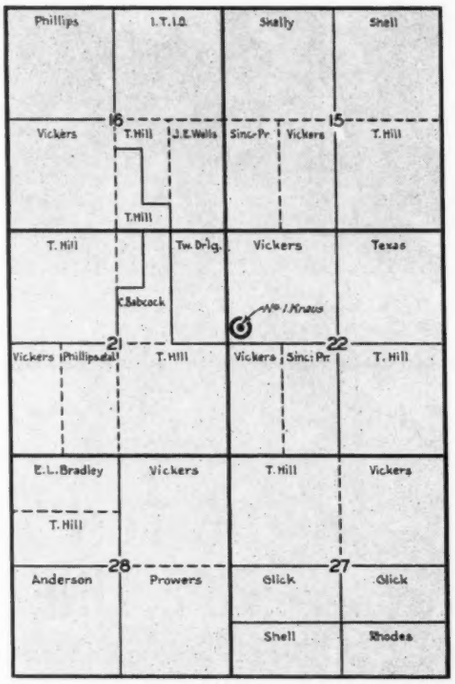
Russell County

Eleven oil producers were completed in Russell County the past week. The largest of these was Coralena Oil Co. No. 4 Boomhower, NE NE NW section 32-15-13w, which made potential of 2,460 bbls. after acidizing. Production was from Siliceous lime at 3,321-23 feet, total depth.

Other completions: W. I. Southern, Inc., No. 4 Sellens, SW NW SW section 29-15-13w, Siliceous lime 3,304 feet; 3,307 feet total depth; acidized; potential 1,595 bbls. Same operator's No. 5 Sellens, SW SE SW section 29-15-13w, Siliceous lime 3,327 feet; total depth 3,330 feet; acidized; potential 2,066 bbls. Coralena Oil Co. No. 6 Trapp, SW SW SE section 30-15-13w, Siliceous lime 3,260-62 feet, total depth; acidized; potential 2,405 feet.

Shell Petroleum Corp. No. 1 Michaelis, NE SE NE section 31-15-13w, Siliceous lime 3,311 feet; total depth 3,319 feet; pumped 1,000 bbls. of oil in 19 hours; acidized; potential 2,180 bbls. Central Petroleum Co. No. 3 Rusch "B," C S half NE SW section 19-12-15w, Oswald lime 2,998-3,025 feet; total depth 3,063 feet; potential 540 bbls. Smoky Hill Oil Corp. No. 1 Miller, NE NW NW section 31-14-13w, Oswald lime 2,836 feet; total depth 2,931 feet; acidized; potential 1,161 bbls. of oil.

A. Billings and others No. 2 Mermis, NW NE NE section 9-14-15w, Oswald lime 3,044 feet; pay 3,070-76 feet; total depth 3,127 feet; plugged back to 3,117 feet and acidized; potential 416 bbls. in 22½ hours. J. C. Shaffer, Inc., No. 5 Polcyn, NE SE NE section 10-14-15w, Gorham sand 3,258-61 feet, total depth; potential 1,728 bbls. National Refining Co. No. 3 Reinhardt "C," NW SW SE section 25-14-15w, Gorham sand 3,150 feet; total depth 3,157 feet; potential 1,886 bbls. Hartman & Blair No. 2 Harbaugh, SE SE SW section 25-14-15w, Gorham sand 3,145-52 feet, total depth; potential 1,307 bbls.



—Mid-Continent Map Co., Wichita.

A new pool has been opened in Ellis County, rapidly growing Kansas oil-producing area, at Vickers Petroleum Co. No. 1 Kraus, SW SW NW section 22-14-19w, officially completed as an oil producer the past week

New work in Russell County was as follows: Shields and others No. 1-A Miller "C," SW SE SE section 31-14-13w, rotary rig; Hartman & Blair No. 4 Rouback "A," SW SW NW section 2-14-15w, ponds; same operators' No. 4 Harbaugh, SE SE SW section 25-14-15w, moving in material; J. C. Shaffer, Inc., No. 6 Polcyn, NW SE NE section 10-14-15w, location; National Refining Co. No. 4 Reinhardt "C," SW SW SE section 25-14-15w, location; Coralena Oil Co. No. 9 Trapp, NE SW SE section 30-15-13w, rigging up rotary; same operator's No. 10 Trapp, NW SW SE section 30-15-13w, location.

Bridgeport Machine Co. No. 1 Mermis, SE NE SW section 33-13-15w, had Gorham sand at 3,312-16 feet, total depth, and oil rose 2,700 feet in the hole in four hours. Empire Oil & Refining Co. No. 7 Crawford, NE SW SW section 2-14-15w, had 2,800 feet of oil in the hole from Gorham sand at 3,289-91 feet, total depth. Braden & McClure No. 1 Herbel, NE NE NW section 35-14-14w, had Gorham sand at 3,165-68 feet, and made potential of 220 bbls. of oil. W. I. Southern, Inc., No. 6 Shaffer, NW NW NE section 31-15-13w, had Siliceous lime at 3,257-59 feet, with 3,100 feet of oil in the hole. Joe Aylward No. 2 Ginther, NW SE NW section 19-12-15w, was estimated good for 75 bbls. of oil daily after acid treatment; total depth 3,110 feet; plugged back to 3,085 feet.

Estimated Daily Production

Estimated daily average production in Kansas for the week ending September 26 and for the preceding week is as follows:

	Barrels	
	Sept. 26	Sept. 19
Oxford City	3,875	3,825
Burrton	14,250	13,800
Ritz-Canton	5,875	5,825
Hollow-Nikkel	3,800	3,750
Voshell	2,975	2,900
Ellsworth County:		
Lorraine-South Lorraine	6,855	6,400
Other pools	1,524	1,528
Rice-Barton Counties:		
Chase	9,550	10,200
Raymond	3,485	2,975
Silica	16,045	13,200
Keesling	3,295	2,925
Hauschild	1,685	2,050
Miscellaneous Rice	5,525	5,566
Miscellaneous Barton	4,520	4,058
Russell County:		
Fairport	2,460	2,188
Gorham-East Gorham	5,695	4,850
Russell	4,100	2,570
Sullivan	2,790	2,220
Other pools	7,361	7,777
Sedgwick County:		
Valley Center	1,290	1,265
Greenwich	1,365	1,360
Robbins	1,140	1,170
Eastborough	960	794
Other pools	477	496
Ellis County	3,079	2,872
Kingman County	483	558
Stafford County	2,074	2,470
Greenwood County	10,400	10,500
Butler County	17,900	17,800
Other fields	26,042	27,448
Total Kansas	170,875	165,250

Rice County

Completions in Rice County included 10 oil producers, the largest being Garden Brothers No. 2 Hauschild, NE cor. section 15-21-7w, in the Hauschild pool, which flowed 1,563 bbls. in six hours and made potential of 5,925 bbls. Top of Chat was 3,371 feet; total depth 3,385 feet. It was a natural flowing well.

Other completions: Empire Oil & Refining Co. No. 5 Janssen "A," NE NW NW section 3-18-8w, Siliceous lime 3,230 feet, corrected; total depth 3,250 feet; acidized; potential 840 bbls. of oil in 18½ hours. Skelly Oil Co. No. 1 Dittmers, SE SW SW section 28-19-10w, Siliceous lime 3,293-96 feet, total depth; acidized; potential 1,333 bbls. Gulf Oil Corp. No. 3 Emma Steckel, SW SE NE section 31-19-10w, Siliceous lime 3,275 feet; total depth 3,295 feet; acidized; pumped 786 bbls. in 19 hours; potential 979 bbls.

Bradley Oil Co. No. 5 Wendell, NW NE NE section 32-19-10w, Siliceous lime 3,340 feet; total depth 3,347 feet; pumped 165 bbls. of oil in 24 hours. Texas Co. No. 2 Kleile, SW NW SW section 34-19-10w, Siliceous lime 3,315 feet; total depth 3,326 feet; potential 791 bbls.; acidized; new potential 1,100 bbls. Stanolind Oil & Gas Co. No. 3 Smith, SE NE SE section 16-20-9w, Siliceous lime 3,251 feet; total depth 3,270 feet; acidized; potential 538 bbls. of oil, with 950 bbls. of water. Gulf Oil Corp. No. 2 Stolz, Jr., SW NW NW section 5-20-10w, Siliceous lime 3,291 feet; total depth 3,311 feet; acidized; pumped 400 bbls. of oil in seven hours; potential 1,480 bbls. J. H. Tatlock No. 8 Berscheit, NE SW NW section 6-20-10w, Siliceous

lime 3,262-80 feet, total depth, corrected; acidized; potential 1,779 bbls. Mid-Continent Petroleum Corp. No. 6 Risse, SE SE NE section 6-20-10w, Siliceous lime 3,307 feet; total depth 3,316 feet; acidized; potential 1,641 bbls. in 24 hours, down three hours.

The following new work in Rice County was reported: Stapleton and others No. 1 Callis, NW NE SE section 16-19-9w, location; Sinclair Prairie Oil Co. No. 2 Volkland, SW SE SE section 20-19-9w, old well being deepened, drilling at 3,726 feet; Shell Petroleum Corp. No. 1 Bayer, SW SW SE section 29-19-10w, rigging up rotary; Hartman & Blair and others No. 1 Schartz "B," old well deepened to 3,335½ feet, not tested; Shell Petroleum Corp. No. 1 Hathaway, NE NE SE section 33-19-10w, set 13-inch casing at 223 feet; Texas Co. No. 3 Kleile, NW NW SW section 34-19-10w, moving in material; Empire Oil & Refining Co. No. 1 Coldwater "B," NE NE NW section 17-20-9w, building rotary rig; Gulf Oil Corp. No. 3 Stolz, Jr., SW SW NW section 5-20-10w, building rotary rig; Mid-Continent Petroleum Corp. No. 7 Risse, SW SE NE section 6-20-10w, rigging up rotary; Stanolind Oil & Gas Co. No. 5 Specht, NE NE SE section 6-20-10w, location.

Continental Oil Co. and others No. 2 Gibson, NE SE SW section 24-18-8w, had 2,050 feet of oil in the hole and was acidized but not tested; total depth 3,220 feet. Shell Petroleum Corp. and others No. 2 Hafermann, C SE section 6-19-9w, was acidized and pumped 10 bbls. of oil in 12 hours; total depth 3,270 feet; plugged back to 3,265 feet. J. H. Tatlock No. 10 Berscheit, SE NE NW section 6-20-10w, total depth 3,320 feet, swabbed 2½ bbls. of oil per hour. Darby Petroleum Co. No. 4 Johnson, SW cor. section 10-21-7w, swabbed 9 bbls. of oil an hour after acidizing at 3,386 feet, total depth. E. J. Shaffer and others No. 4 Hauschild, SW NW NE section 15-21-7w, swabbed 89 bbls. of oil in four hours, total depth 3,396 feet.

Barton County

Yarnell & Carlson and others completed another good producer in the Bloomer pool of Barton County at No. 2 Bloomer, SE NE NW section 36-17-11w. It topped Siliceous lime at 3,264 feet; total depth 3,271 feet. It pumped 886 bbls. of oil in 24 hours, down 15 hours, and made potential of 1,640 bbls.

Republic Oil Co. No. 2 Bloomer, NW SE NW section 36-17-11w, topped Siliceous lime at 3,276 feet and was completed at 3,287 feet, total depth. It pumped 570 bbls. of oil in 24 hours; was acidized and made potential of 1,136 bbls. The other Barton County completion was Slick, Pryor & Lockhart No. 1 Meyers, SE SE NE section 13-17-11w. Top of Siliceous lime was 3,285 feet; pay 3,302-11½ feet, total depth. It pumped 364 bbls. of oil in 24 hours; was acidized and made potential of 487 bbls.

Four new tests, including two wildcats, were reported in Barton County. Missouri Valley Oil & Gas Co. No. 1 Peach, SE cor. section 24-16-14w, wildcat, was moving in material. Freehorn and others No. 1 Sooy, NW NW NE section 27-18-12w, wildcat, was a cellar. National Refining Co. No. 5 McLean, NW SE SE section 25-17-11w, was a location. Empire Oil & Refining Co. No. 2 Rader, NE NW NW section 12-19-11w, was rigging up rotary.

E. P. Heath, district superintendent, Sunray Oil Co., Hesston, Kans.

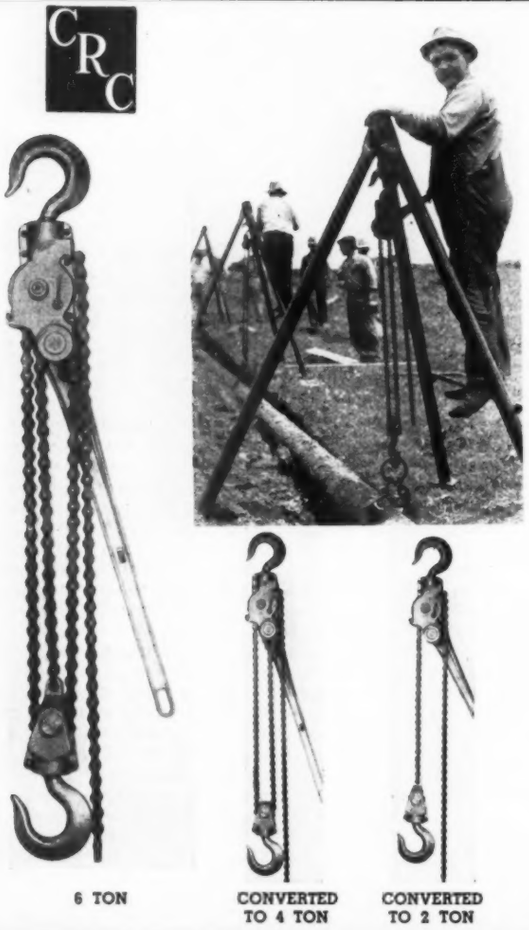
Reno County

Two new oil wells were completed in Reno County. Magnolia Petroleum Co. No. 2 Mayme Harris, NW NE NW section 9-26-4w, in the Hilger area, flowed 10 bbls. of oil an hour for 10 hours from Viola lime at 4,120-23 feet, total depth. It was acidized and made potential of 1,520 bbls. Shell Petroleum Corp. No. 3 Welch "A," C NE SW section 9-24-4w, in the Burrton area, topped Chat at 3,296 feet; total depth 3,393 feet. It was acidized two times and on completion test pumped and flowed 424 bbls. of oil and 16 bbls. of water in 24 hours. Graham and others No. 1 Miller, NE NE SE section 36-25-10w, wildcat, topped Viola at 4,152 feet; Simpson 4,245 feet; Siliceous 4,333 feet; sulfur water intruded at 3,362 feet, total depth, and it was dry and abandoned. H. F. Wilcox Oil & Gas Co. recompleted No. 1 Neufeldt, SW SW NW section 12-23-4w, after plugging back to 3,380 feet, perforating casing and acidizing, and it pumped and flowed 1,109 bbls. of oil in 24 hours.

New work in Reno County: Olson Drilling Co. and Shell Petroleum Corp. No. 6 England, NE SW SE section 34-23-4w, cellar; Shell Petroleum Corp. No. 2 Brown, C NE NW section 10-24-4w, building rotary rig; Ohio Oil Co. No. 2 Priddle, SW SW SE section 17-24-4w, old well deepening, drilling at 3,379 feet; same operator's No. 4 Priddle, SW SE SE section 17-24-4w, moving in material; Maxwell Oil & Gas Co. No. 1 Clayton, SE SE NW section 23-25-7w, wildcat, location.

Ellis County

Vickers Petroleum Co. completed a new Ellis County pool opener at No. 1 Kraus, SW SW NW section 22-14-19w, southwest of Hays. This wildcat topped anhydrite at 1,390 feet; Oswald lime 3,420 feet; Conglomerate 3,710 feet; Siliceous lime 3,735 feet; sand 3,737-40 feet, total depth. It



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made potential of 259 bbls. of oil in 24 hours, down four hours.

Margay Oil Co. No. 3 Bemis "A," SW SE SE section 16-11-17w, topped Siliceous lime and set 7-inch casing at 3,326 feet and was completed at 3,332 feet, total depth. It made potential of 1,665 bbls. of oil. Philhan Oil Co. No. 1 Gerstner, SW SW SE section 24-14-17w, an old wildcat, failed to make a commercial producer by plugging back from 3,506 feet to 3,252 feet and acidizing, and was dry and abandoned.

Bridgeport Machine Co. and others No. 1 Madden Estate, NE NW NW section 26-15-18w, an old wildcat, was underreaming 6-inch casing to deepen from 3,341 feet, old total depth. It was the only new work reported in Ellis County.

Phillips Petroleum Co. No. 2 Bemis, SE SE NE section 21-11-17w, swabbed 49 bbls. of oil in 12 hours from pay at 3,458-61 feet, total depth. Uscan Oil Co. No. 5 Bemis, NW NE NE section 21-11-17w, had Siliceous lime at 3,339-42 feet, total depth, and pumped 42 bbls. of oil in the first hour.

McPherson County

In the Graber area, McPherson County, Continental Oil Co. completed No. 1 Wenger "A," SW SW NE section 32-21-1w, at 3,339 feet, total depth, after topping Hunton lime at 3,310 feet. It pumped 48 bbls. of oil in 24 hours and made potential of 60 bbls. after acid treatment. Rosenthal and others No. 4 Johnson, C N half S half SE section 30-18-2w, topped Kansas City lime at 2,292 feet; had pay at 2,308-18 feet, total depth, completed. After acidizing, it made potential of 70 bbls. of oil. Hawkins and others No. 1 Ritikofer, NE NE SE section 2-20-1w, wildcat, had Wilcox sand at 3,413 feet and was dry and abandoned in Siliceous lime at 3,474-3,505 feet, total depth.

The only new work in McPherson County was at Shell Petroleum Corp. No. 1 Griffin "B," C SW NE section 14-19-2w, an old well rigging up to deepen.

Dickey Oil Co. and Gulf Oil Corp. No. 2 Goering, SW SE SE section 17-21-1w, pumped 130 bbls. in two hours after acidizing at 3,344 feet, total depth.

Sedgwick County

Aylward and Shell Petroleum Corp. No. 3 Stolie, SE NE SW section 11-26-2, in the Greenwich pool, Sedgwick County, pumped 416 bbls. of oil, cutting 40 per cent water, in 24 hours and was completed in Viola lime at 3,156-58 feet, total depth. Chat was topped at 2,870 feet. The only other completion in the county was a wildcat failure at Earl Wakefield and others No. 1 Howard, SE SE NE section 25-25-2, dry and abandoned after deepening to 3,325 feet.

Rooks County

The only Rooks County completion was Sunray Oil Co. No. 1 Senecal, SE SE SW section 26-10-19w. It topped Oswald lime at 3,282 feet; had pay at 3,489-95 feet, total depth; pumped 210 bbls. of oil in 20 hours after acid treatment, and made potential of 352 bbls.

New work in Rooks County: Empire Oil & Refining Co. No. 1 Ham, SW NW NW section 24-8-19w, rig; Superior Oil Co. and others No. 2 Johnson "A," NE SW SE section 26-10-19w, rigging up rotary.

Stafford County

C. B. Davis and others No. 2 Riley, SW SE SE section 19-22-11w, was the only Stafford County completion. It topped Simpson at 3,716 feet, had Siliceous lime at 3,753-62 feet, total depth, and was dry and abandoned.

Empire Oil & Refining Co. No. 2 Snider, SW NW SE section 3-21-11w, was a location for a new Stafford County test.

Ellsworth County

The only Ellsworth County completion was a wildcat failure at Empire Oil & Refining Co. No. 1 Kunkle, SE SW SE section 16-15-8w. It topped Kansas City lime at 2,585 feet; had water in Siliceous lime at 3,019-35 feet, total depth, and was dry and abandoned. Same operators staked location for the only new test in the county at No. 5 Janssen "B," SE NE SW section 34-17-8w.

Pawnee County

The Pawnee County discovery well, the Simpson Oil Co. and others No. 1 Gates, SW cor. section 13-20-16w, was completed at 3,841 feet, total depth. It topped anhydrite at 1,088 feet; Kansas City lime 3,511 feet; Siliceous lime, the producing formation, 3,815 feet; and had saturation from 3,832 feet to bottom. Seven-inch casing was set at 3,819 feet. It made potential of 187 bbls. of oil in 24 hours, naturally. After acidizing, it flowed 105 bbls. in the first four hours; then made potential of 257 bbls. of oil in 24 hours, flowing 60 bbls. of oil in the last 9½ hours. Gas gauged 1,250,000 feet.

Harvey County

In the Warkentine area of Harvey County, Palmer and others completed No. 1 McBurney, C NW NW section 12-23-2w, at 2,978 feet, total depth. It flowed 2,085 bbls. of oil in 24 hours from Chat, topped at 2,955 feet.

Trego County

Central Commercial Oil Co. finally completed No. 1 Wagg, NW NW SE section 17-13-21w, wildcat in the Riga area, Trego County, after finding Granite at 4,562-63 feet, total depth, and plugging back to 3,864 feet. On completion test it pumped 8 bbls. of oil and 2 bbls. of water. It was completed in a second hole, a difficult fishing job necessitating abandoning the original hole at 1,600 feet. Top of Kansas City lime was 3,548 feet; Conglomerate 3,860 feet; Siliceous lime 3,874 feet.

Butler County

Two oil producers were completed in the Elbing pool, Butler County, with two failures elsewhere in the county. National Refining Co. No. 12 North Lathrop, NE NW NW section 17-23-4, topped Kansas City lime at 1,862 feet; total depth 2,065 feet; and after acid treatment, pumped 227 bbls. of oil, cutting 40 per cent water, in 24 hours. Page Houston No. 2-A Eyestone, SE NW SW section 8-23-4, made potential of 109 bbls. of oil after acidizing. It was bottomed at 2,093 feet.

Dalton and others No. 1 Miley, C SW NE section 17-27-5, wildcat, was abandoned at 350 feet,

(Continued on Page 78)

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Oklahoma Operations

By
DAL DALRYMPLE

NEW MOORE WELL PRODUCES 300,000,000 FEET OF WET GAS

Allowable oil production in Oklahoma in October will be fixed at 559,900 bbls. daily, if the Corporation Commission approves the recommendations made last Friday by W. J. Armstrong, chief conservation officer, following a conference with Oklahoma producers. This is a decrease of 3,100 bbls. from the September allowable. Approval of the conservation officer's recommendation usually is a matter of form.

Field news largely was routine, although several good producers were completed at Oklahoma City and elsewhere in state fields. Anderson-Prichard Oil Corp. No. 1 State, in the Moore field, Cleveland County, appeared to be one of the biggest gas wells ever drilled in Oklahoma when it was shut in Saturday after flowing only 27 minutes and cutting out two heavy master gates. Estimates of production ranged from 236,000,000 feet to more than 300,000,000 feet daily. The tremendous flow also contained considerable oil and distillate. It had Wilcox sand at 7,210-56 feet, total depth. It is located at SW SW SE section 16-10-2w.

Another big producer was nearing completion in the Crescent pool, Logan County, at Mid-Continent Petroleum Corp. No. 4 Campbell, SW SE NE section 33-17-4w. It was bottomed in Wilcox sand at 6,275 feet and production was estimated at 1,000 bbls. of oil an hour. Four other wells also are due for early completion at Crescent.

In the Crescent field, Caddo County, Ohio Oil Co. and others No. 10 Wade, NW NE SW section 2-5-9w, uncovered a new deep sand at 6,805-29 feet, total depth 6,854 feet, and was estimated good for 20 to 25 bbls. of oil and more than 2,000,000 feet of gas. The new sand was not found in the same operators' No. 4 Marchand, Cement deep pay discovery well, offsetting the new well on the north. Operators may plug back at No. 10 Wade and test a sand at 6,000-20 feet.

The litigation between the Barnsdall-Midway Oil Co. and British American Oil Producing Co., involving the valuable Piersol and Stone tracts in the Capitol extension of the Oklahoma City field, held attention of state oil men during the week. The British American company was denied a new trial in district court and gave notice of appeal to the state supreme court. The court fixed the supersedeas bond at $1,000,000 and provided in the order that when cash accruals from Barnsdall-Midway Oil Co.'s share of production from the leases involved should exceed that amount, the court having jurisdiction might order additional bond to be put by the defendant from time to time.

The amount of bond is designed to secure the plaintiff, the Barnsdall-Midway company, for cash accruals to its net interest in the oil, gas and casinghead gas produced or to be produced in the near future from the leases involved in the suit. The amount of the bond does not cover the entire value of the property in controversy, but merely covers said cash accruals. Litigation was started several months ago after two involved leases were proved for big production by the British American company and after the Midway Oil Co. stock had been acquired by the Barnsdall company. The plaintiffs contend the Midway company was to furnish money for buying leases north of the state capitol and that development was to be done by the British American company, with the two companies owning the property jointly after costs had been liquidated; and also charge the plaintiff company drilled No. 1 Mary Green, Wilcox sand discovery well in the area, but before it was completed bought the additional acreage and denied a half interest to the Midway.

Four new oil producers were completed in the Oklahoma City field and three in other Oklahoma County pools. Anderson-Prichard Oil Corp. No. 1 Boedecker, NE SE SW section 22-12-3w, Block 16 Barrow's Second Addition, topped second Wilcox sand at 6,409 feet; total depth 6,499 feet. It flowed 924 bbls. in 24 hours, making potential of 3,783 bbls. Later, it was shot with 45 quarts, flowed 792 bbls. in six hours and made potential of 6,640 bbls. Hall-Briscoe No. 1 Francis, SE SE SW section 22-12-3w, flowed 6,638 bbls. in 20 hours, and later made potential of 9,614 bbls. Top of second Wilcox sand was 6,404 feet; total depth 6,496 feet.

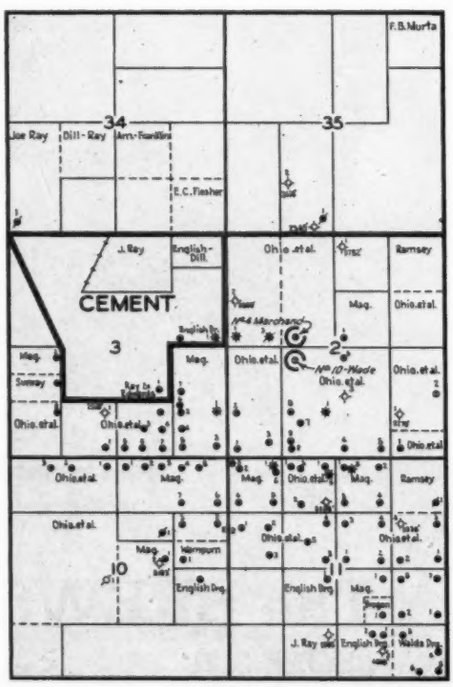
Sunray Oil Co. and Phillips Petroleum Co. No. 2 Harn, SE SE NW section 27-12-3w, topped Wilcox sand at 6,409 feet; total depth 6,458 feet. It flowed 994 bbls. in six hours and made potential of 8,878 bbls. Travis Petroleum Co. No. 4 Lucas, NE NW SW section 36-12-3w, flowed 123 bbls. of oil in 24 hours, cutting 20 per cent water, and was completed at 6,424 feet, total depth. Lower Simpson, the producing horizon, was topped at 6,-175 feet.

In the Britton district, Slick-Urschel Oil Co. and others completed No. 1 Hannum, NW NW SW section 20-13-3w, in Simpson formation at 6,585-6,685 feet, total depth. After second acid treatment it flowed 945 bbls. of oil in six hours, making potential of 5,670 bbls.

In the Edmond sector, Slick-Urschel Oil Co. and Oklahoma Oil Corp. No. 4 Suneram, NW SW NE section 6-13-3w, was completed as a producer in first Wilcox sand at 6,635-58 feet; total depth 6,690 feet. It flowed 693 bbls. in eight hours, after acidizing, flowing 1,470 bbls. in four hours, making potential of 8,818 bbls. Ohio Oil Co. No. 12 Dahl, NE SW SE section 31-14-3w, topped second Wilcox sand at 6,605 feet; total depth 6,687 feet; and flowed 706 bbls. in one hour. After shot, it flowed 2,561 bbls. in four hours, making potential of 15,364 bbls.

New work in Oklahoma County was as follows: British American Oil Producing Co. No. 1 Francis Heights, SE SW SE SW section 22-12-3w, Block 3, Francis Heights Addition, cellar; Ohio Oil Co. No. 3 Hathaway, NE SE NW section 6-13-3w, rig; Slick-Urschel Oil Co. and others No. 1 Chestnut, SW NW SW section 20-13-3w, digging cellar and pits; same operators' No. 1 Belle McGrew, SW SE SW section 20-13-3w, digging cellar and pits.

British American Oil Producing Co. No. 1 Culbertson, NE cor. section 27-12-3w, flowed 1,905 bbls. of oil in 4 hours and 20 minutes and was taking potential test. It was bottomed at 6,418 feet; top of Wilcox sand, 6,228 feet. Knox Garvin and others No. 1 Woodbridge, NW SE SE section 27-12-3w, was bottomed at 6,495 feet and preparing to take potential after flowing 110 bbls. of oil per hour while drilling. Top of second sand was 6,343 feet.



—Mid-Continent Map Co., Tulsa.

Ohio Oil Co. No. 10 Wade, section 2-5n-9w, south offset to No. 10 Marchand, deep pay discovery at Cement, had no correlation with the Marchand below the shallow sands and failed to find the deep pay uncovered in the original deep test

Estimated Daily Production

Estimated daily average production of Oklahoma in the week ending September 26 was as follows:

	Barrels	
	Sept. 26	Sept. 19
Allen	8,950	9,000
Burbank	7,800	7,800
South Burbank	14,600	14,300
Balance Osage	22,600	22,800
Blackwell district	5,325	5,150
Bristow-Slick	8,425	8,500
Chandler	4,025	4,200
Crescent	9,100	9,475
Cromwell	3,675	3,675
Cushing-Shamrock	11,375	11,450
Duncan district	4,025	4,050
Edmond	17,325	16,100
Fish	7,325	7,400
Fitts	65,150	68,475
Gray	1,525	1,550
Graham	4,750	4,750
Healdton	9,450	9,375
Hewitt	4,500	4,450
Holdenville	1,000	1,000
Keokuk	6,650	8,975
Konawa	1,925	1,825
Lucien	12,825	13,100
Marshall-Lovell	750	900
Oklahoma City	143,500	147,375
Olympic	8,775	8,800
Papoose	950	1,025
Polo	2,725	2,825
Sasawka and townsite	2,825	3,325
Sholem-Alechem	3,400	3,475
Seminole field:		
Bowlegs	11,575	11,675
Carr City	5,900	5,700
Earlsboro	6,400	6,600
South Earlsboro	925	900
East Earlsboro	9,825	10,050
Little River	12,625	12,525
East Little River	1,275	1,250
Maud	950	1,025
Mission	2,425	2,400
Seminole	10,000	9,650
East Seminole	4,125	4,175
Searight	5,525	5,550
Total Seminole	71,450	71,500
St. Louis-Pearson	24,350	23,550
Tatums	3,150	3,125
Tonkawa-Garber-Thomas	5,550	5,575
Wewoka	3,975	3,975
Yale-Jennings	4,100	4,175
Other pools	72,750	73,425
Total Oklahoma	580,575	590,450

Pontotoc County

One new producer was completed in the Fitts field and two elsewhere in Pontotoc County, with one abandonment. Carter Oil Co. No. 18 Richards, SE cor. section 30-2-7, was the Fitts completion. It topped McLish at 4,050 feet; Dense 4,300 feet, and Wilcox sand, the producing formation, at 4,-397 feet; total depth 4,418 feet. It flowed 1,940

bbls. of oil in 2 hours and 50 minutes and later made potential of 4,138 bbls.

Hilton Phillips No. 3 Bettis, SW SE SW section 21-7-4, East Ada district, topped Simpson at 4,173 feet; total depth 4,176 feet; swabbed 675 bbls. of oil in 24 hours; acidized, and pumped 3,122 bbls. in 48 hours. Sinclair Prairie Oil Co. No. 10 Rolls, C SE SW section 28-5-8, Allen area, pumped 5 bbls. of oil in 24 hours after a shot. Total depth was 1,415 feet. J. B. Sledge No. 1 Miller, C S half SE NE section 16-5-8, topped Allen sand at 780 feet and was dry and abandoned at 1,170 feet, total depth.

Four old Pontotoc County wells were deepened and recompleted. Sunray Oil Co. No. 5 Richey, SE cor. section 1-4-7, was deepened from 2,039 feet to 2,105 feet, tools stuck and it was abandoned. Magnolia Petroleum Co. No. 1 Wilamette, SW SW NE section 12-7-4, was dry and abandoned after deepening from 3,928 feet to 4,200 feet, in Dolomite topped at 4,175 feet. Oklahoma Oil Corp. No. 4 Bruno, SE SE NE section 25-7-4, pumped 150 bbls. of oil and 25 bbls. of water in 24 hours after deepening from 4,133 feet to 4,251 feet, in second Wilcox sand topped at 4,247 feet. Clyde Alexander No. 1 Tucker, SE cor. section 34-7-4, deepened from 4,277 feet to 4,282 feet and pumped 282 bbls. of oil and about 500 bbls. of water in 24 hours.

New work in Pontotoc County: Amerada Petroleum Corp. No. 3 Woolley, NE SE SE section 21-2-7, rig on ground; J. E. Crosbie, Inc., No. 1 L. Burris, N half NE SW SE section 22-2-7, rig on ground; same operator's No. 2 L. Burris, C W half W half SE section 22-2-7, cellar; same operator's No. 2-B Harden, NW SW NE section 30-2-7, waiting on cement, total depth 535 feet; E. H. Moore and others No. 1 Deaner, NW SW SE section 23-2-7, digging cellar; same operators' No. 1-A Cradduck, NW NW SW section 29-2-7, digging cellar; Skelly Oil Co. No. 1 Metropolitan, SW SE SW section 23-2-7, cellar; Phillips Petroleum Co. No. 2 Bates, NW NE NW section 26-2-7, digging cellar; Carter Oil Co. No. 23 Richards, NE NE SE section 30-2-7, location; H. H. Diamond No. 1 fee, SE cor. section 30-5-8, wildcat, cellar and pits.

Fleetborn Oil Corp. No. 4-A Morin, SW SW SE section 20-2-7, total depth 3,773 feet; was acidized with 4,000 gallons and flowed 291 bbls. gross through tubing in three hours, but had not been completed. Continental Oil Co. No. 1 Bates, NW NE SE section 27-2-7, flowed 65 bbls. gross in 18 hours after acidizing with 8,000 gallons and was testing; total depth 4,287 feet; previously it had flowed 400 bbls. net in 18 hours after first acid treatment with 5,000 gallons. Skelly Oil Co. No. 15 Park College, SE NW NE section 28-2-7, was acidized with 10,000 gallons at 3,635 feet, total depth, and flowed 406 bbls. of oil net in two hours. J. E. Crosbie, Inc., No. 3-B Harden, NE SW NE section 30-2-7, was acidized with 10,000 gallons and flowed 395 bbls. in one hour through casing; total depth 3,628 feet.

Okfuskee County

Completions in Okfuskee County were as follows: Blackwell Oil & Gas Co. No. 5 Dalton, NE cor. section 36-10-8; senora sand 1,712 feet; total depth 1,763 feet; shot; flowed 360 bbls. in 24 hours. Sinclair Prairie Oil Co. No. 1 Palmer, NE SE NW section 19-10-9; Senora sand 1,842 feet; total depth 1,863 feet; shot; swabbed 280 bbls. in 19 hours. J. A. Chapman No. 1 Peter King "B," SW cor. sec-

M. E. Perry, district superintendent, Slick-Urschel, Inc., Shawnee, Okla.

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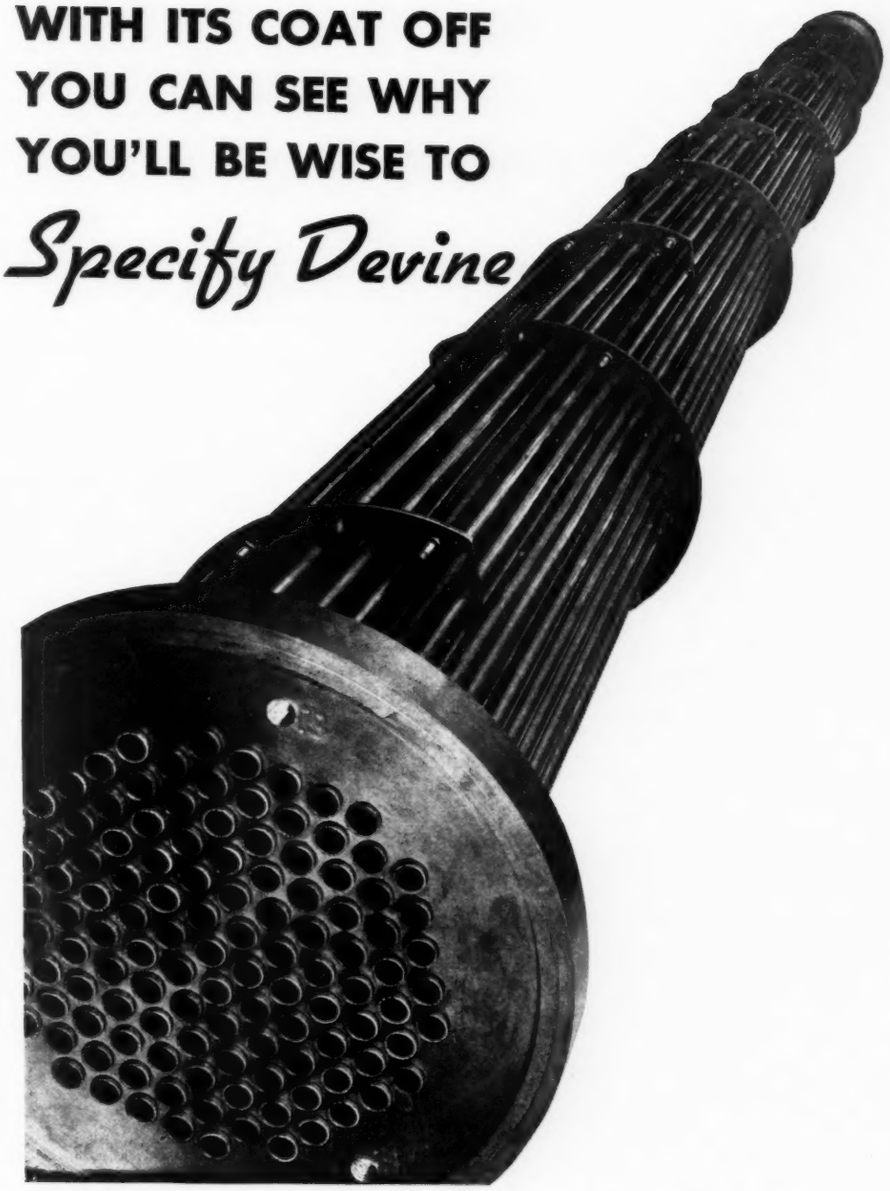

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tion 30-10-9; Senora sand 1,720-69 feet; total depth 1,772 feet; shot; flowed 90 bbls. in 24 hours. Chapman & McFarland No. 1 Yarhola, SW SE SW section 30-10-9; Senora sand 1,736-66 feet; total depth 1,775 feet; shot; flowed 5 bbls. of oil, with 8,000,000 feet of gas in 24 hours. Gulf Oil Corp. No. 5 Cohee, NE SW NW section 31-10-9; Senora sand 1,731-78 feet; total depth 1,780 feet; shot; flowed 340 bbls. in 24 hours. Pure Oil Co. No. 2 Rentic, NE NW NE section 26-12-11; Wilcox sand 3,553-92 feet, total depth; shot; flowed 350 bbls. in 24 hours.

Four new operations in Okfuskee County were reported. Manahan & Grisso No. 12 Dalton, NE SW SE section 36-10-8, was a rig; Sinclair Prairie Oil Co. No. 2 Palmer, SE NE NW section 19-10-9, rigging up rotary; same operator's No. 3 Palmer, SE SE NW section 19-10-9, location; Pure Oil Co. No. 4 Rentic, NE NW NE section 26-12-11, old well, rigging up to deepen.

Hughes County

Canavan & Davis No. 1 Burke, C NW NE section 8-8-10, the only Hughes County producer to be completed, flowed 80 bbls. of oil in 24 hours from pay sand at 3,145-65 feet. Top of Cromwell sand was 3,045 feet; total depth 3,200 feet. Suppes & Horman No. 1 Sands-Mandler, SE SW SW section 4-9-9, Papoose area, was dry and abandoned at 1,737 feet, total depth.

Canavan & Davis No. 2 Roberts, NW SE SE section 5-8-10, the only new Hughes County test, was preparing to run casing to 89 feet, total depth.

Osage County

Completions in Osage County included two producers in the Naval Reserve area. Tide Water Oil Co. No. 8 Graves, NW SW NE section 9-24-7, topped Bartlesville sand at 2,594 feet; was bottomed at 2,628 feet and, after a 60-quart shot, flowed 299 bbls. in 24 hours. Lewis Production Co. and Continental Oil Co. No. 16 Ah-Kah-Ne, SW NW SE section 9-24-7, flowed 340 bbls. in 24 hours after a 60-quart shot. Top of Bartlesville sand was 2,597 feet; total depth 2,653 feet.

Philtex Oil Co. No. 59 Osage, SW NW NW section 22-25-12, topped Bartlesville at 1,424 feet; total depth 1,515 feet. It pumped 1½ bbls. of oil and 2 bbls. of water, completed. Indian Territory Illuminating Oil Co. No. 36 Osage, NE cor. section 36-25-9, topped Bartlesville sand at 1,954 feet, drilled to 2,029 feet, total depth; pumped 1½ bbls. of oil and 5 bbls. of water, completed. Murray Ringold and others No. 3 Osage, C W half W half SW section 17-21-9, was dry and abandoned at 2,363 feet, total depth.

The following new work was reported in Osage County: Ohio Osage Oil Co. and others No. 27 Osage, SW NW SW section 9-21-9, machine; Bay Oil Corp. No. 1 Osage, NE NW SW section 25-22-7, old well to drill deeper; Link Oil Co. No. 8 Osage, SW NE NW section 4-22-12, drilling at 850 feet; Tide Water Oil Co. No. 9 Graves, SW NW NE section 9-24-7, digging pits; Lewis Production Co. and Continental Oil Co. No. 16 Osage, SE SW SW section 16-24-7, digging pits; Lewis Production Co. No. 1 Osage, NW cor. section 34-24-7, digging pits; Spartan Investment Corp. No. 7 Osage, NW NE SE section 35-25-9, location; Kewanee Oil & Gas Co. No. 7 Hale, NE SW SE section 27-26-6, building rig.

Kay County

Shell Petroleum Corp. and Continental Oil Co. recompleted No. 1 Lawrence, C S half SE NW section 5-28-1w, Kay County, after deepening from 2,395 feet to 2,794 feet. It swabbed and flowed 139 bbls. of oil naturally before shot and 260 bbls. after shot.

Payne County

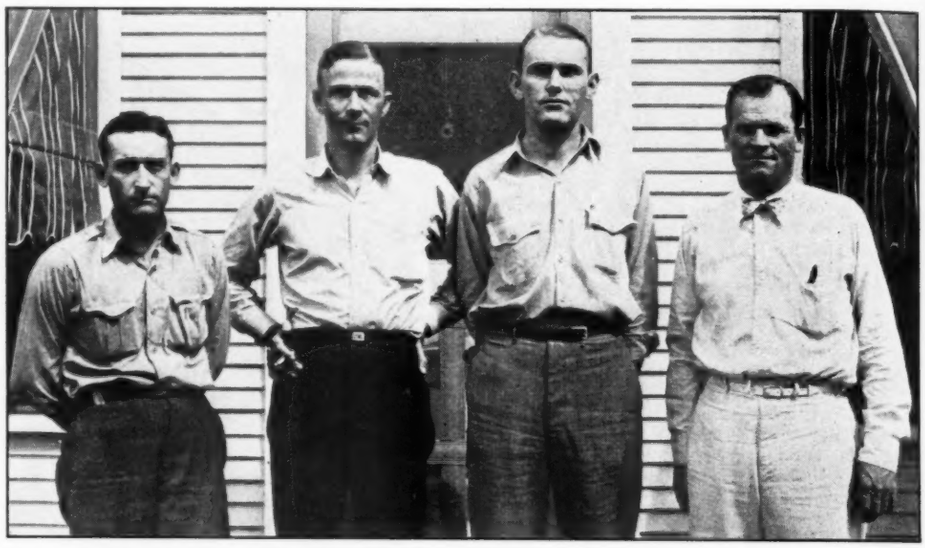
Twin State Oil Co. staked location for No. 1 Spinning, SE SW NW section 5-19-5, new Payne County test.

Seminole County

Four oil producers were completed and one test abandoned in Seminole County. The producers were: Carter Oil Co. and others No. 5 Aldridge, C N half NW NE section 35-11-6, Misener 4,149 feet; Hunton 4,152 feet; total depth 4,158 feet; swabbed 336 bbls. of oil in 24 hours. Same operators' No. 1 Hully, NE NE SE section 15-10-6; Misener 4,231 feet; total depth 4,238 feet; swabbed 240 bbls. in 24 hours through tubing. Texas Co. No. 1 Grisso, SW NW NW section 16-9-7; Cromwell sand 3,439 feet; total depth 3,459 feet; flowed 480 bbls. in 12 hours. Magnolia Petroleum Co. No. 3 Drewery, SE cor. section 18-9-7, East Seminole area; Cromwell sand 3,464 feet; total depth 3,469 feet; flowed 260 bbls. in 24 hours and swabbed 756 bbls. in 48 hours. The failure was Texas Co. No. 3 Steward, SE SW NE section 19-9-7, an old well deepened from 3,495 feet to 4,367 feet, where it was abandoned with a hole full of water.

The only new Seminole County tests were Carter Oil Co. No. 1 Lambert, C E half NW SW section 23-10-6, location, and Magnolia Petroleum Co. No. 4 Drewery, NE SE SE section 18-9-7, location.

Ross Oil Co. No. 1 Hollis, NE SE NE section 17-9-7, East Seminole area, had a hole full of oil at 3,450 feet, total depth, and was testing. Tom Phillips and Kimrow Drilling Co. No. 1 Thompson, SW NE NW section 19-9-7, was acidized at 4,054 feet, total depth, and flowed 300 bbls. of oil gross in five hours. Pioneer Drilling Co. and Texas Co. No. 1 Twinam, SW NE NE section 35-11-6, in the Keokuk area, was to acidize after swabbing 25 bbls. of oil and 12½ bbls. of water in eight hours and swabbing down; total depth 4,150 feet.



Left to right: Oscar Hatcher, chief geologist, E. H. Moore, Inc.; G. A. Northrup, geologist; Maurice R. Teis, assistant chief geologist; Fred Kirschbaum, scout, all of the Moore organization; photographed at Fistown, Okla.

Cleveland County

Another big producer was completed in the Moore pool, Cleveland County. It was Sinclair Prairie Oil Co. and others No. 1 Fant, NW cor. section 27-10-2w, on the community block. It had second Wilcox sand at 7,261-94 feet, total depth; flowed 1,678 bbls. of oil in four hours and made potential of 9,146 bbls. Gas averaged 27,700,000 feet.

Noble County

Glen Dial and others completed No. 1 Kolb, SW NE SW section 28-20-2w, Lucien pool, Noble County, in second Wilcox sand at 5,124-34 feet, total depth. It made 24-hour potential of 1,150 bbls. of oil. Top of first sand was 5,030 feet. Same operators were digging cellar for No. 2 Long, SW SE NW section 28-20-2w, only new Noble County operation.

Pittsburg County

Mid-Western Oil & Gas Co. No. 2 Court-Shelton, SW SW SE section 7-7-18, was the location for a new test in Pittsburg County.

Coal County

The following new work was reported in Coal County: Continental Oil Co. No. 1 Cleland, NW SW NE section 26-1-8, location; same operator's No. 1 Heedson, SE NE NW section 26-1-8, location; same operator's No. 1 O'Neal, NE SE NW section 26-1-8, location, all to be 1,100-foot tests; and Continental Oil Co. No. 1 Daniels, SW NE SW section 27-1-9, wildcat, building rig.

Creek County

Completions in Creek County: Anthony No. 3 Barton, NE cor. section 4-16-12; sand 2,242 feet; total depth 2,260 feet; 45 bbls. of oil with 1,500,000 feet of gas. Sinclair Prairie Oil Co. No. 11 Upton, C NE NE section 4-16-12; sand 2,258-70 feet, total depth; swabbed and flowed 66 bbls. A. A. Bailey and others No. 1-A Brown, NW cor. section 5-14-9, dry and abandoned 1,301 feet, total depth. W. C. McBride, Inc., No. 2 Fears, NW SW NE section 3-15-7, Wilcox sand 4,008-48½ feet, total depth; pumped 71 bbls. of oil and 6 bbls. of water in 14 hours. Riverland Oil Co. No. 2 Burgess, NW SW SW section 32-15-9, Layton sand 1,200 feet; total depth 1,255 feet; 35 bbls. in 24 hours. Indo Oil Co. No. 1-A Sapulpa, SW NW NW section 33-18-11, dry and abandoned at 2,324 feet, total depth.

New work in Creek County: W. C. McBride, Inc., No. 3 Fears, SE NW NE section 3-15-7, location; L. Abraham and others No. 2 Holman, SE NE NE section 24-17-9, moving in material; Spartan Supply Co. No. 15 Morrison, SE NW NW section 8-18-11, machine.

Okmulgee County

Downing and others No. 8-A Colbert, C NE NW section 1-15-14, Okmulgee County, had pay sand at 1,339-50 feet; total depth 1,355 feet; pumped 35 bbls. of oil and 75 bbls. of water, completed. J. E. Moore No. 2-A Roe, SE NE NE section 10-15-14, was completed in sand at 1,567-83 feet, total depth, producing 20 bbls. of oil.

A. W. Anthony and others No. 1-A Smith, NW NE NE section 21-12-14, was rigging up machine at the only new Okmulgee test.

Tulsa County

F. B. Kroger No. 1-A Haikey, NE SE SE section 32-18-14, Tulsa County, produced 22 bbls. of oil after a shot and was completed in Dutcher sand at 1,518-30 feet, total depth.

Work was started at two new Tulsa tests. F. B. Kroger No. 2 Haikey, SE cor. section 32-18-14, had spudded. S. W. Anthony No. 1-A Wilcox, NW cor. section 3-16-12, was moving in machine.

Muskogee County

Robinson Oil Co. and others completed No. 3 Mussellem, NE NW NE section 5-13-19, Muskogee County, in sand at 1,464-68 feet, total depth. It had a showing of oil but water intruded and it was dry and abandoned.

Atoka County

A. J. Sanders No. 3 Redden, NW SW SW section 19-1-15, Atoka County, was abandoned at 750 feet, total depth.

Carter County

Completions in Carter County: Samedan Oil Co. No. 1 Sexton, NW NE SE section 6-2s-2w, pay sand 1,614-34 feet; total depth 2,307 feet; 30 bbls. Cox & Hamon No. 27 R. Wesley, SW NW SW sec-

(Continued on Page 78)

Southwest Texas District

By GEORGE WEBER

WILDCAT FAILURES IN THREE COUNTIES; SAXET ACTIVITY

HOUSTON, Tex., Sept. 28.—Failures of Duval and McMullen County wildcats; new activity in Flour Bluff field of Nueces County and reported showings in a San Patricio County wildcat, shared the spotlight of Southwest Texas development during the past week. The Saxet field of Nueces County continued the most active, followed by Loma Novia, Seven Sisters and Lopez of the Laredo district. Wildcats along the Jackson trend fared generally unsuccessfully, with some failures and few showings.

Center of attention in the Lower Coastal region, due in considerable part to the secrecy of operations, was the Eleanor Oil Co. No. 1 Kline. The wildcat, drilling between Gregory and Ingleside, in the eastern section of San Patricio County, was reliably reported to have a total depth of 6,650 feet. A Schlumberger survey was run on the test, the results of which were not announced. Considerable 7-inch casing was on the site, though the true purpose of running it is at present conjectural. Lease play in the immediate vicinity of the test, about 2½ miles southeast of the new McCampbell field which straddles the San Patricio-Aransas County line, was given impetus by the reported acquisition of additional acreage by the wildcat operators.

Indications in Goliad

Goliad County showed indications of a new field to get a test shortly as California Co. No. 1 Langeebe, in the Thomas Hancock Survey was rebuilding derrick and rigging up after pulling in the derrick recently. The test is bottomed at 5,052 feet and will perforate for production after plugging back to sand at 4,797 feet.

In Bee County, the Siznod Oil Corp. reported the coring of pay sand in No. 1 Holzmark. This test is located about 1¼ miles southeast of the Voss field, and a quarter mile northwest of gas production on the Foley property. Gas sand was reported cored from 3,311-31 feet underlain by 5 feet of oil sand. The test is being carried to the Pettus and will be plugged back to the above mentioned sand in the Hockley if deeper exploration fails to uncover better indications of production.

The active Lower Gulf Coast section of San Patricio and Nueces Counties saw no startling discoveries during the week, though developments of the week previous were realized in completions of some tests.

Flour Bluff was extended to the north approximately one-half mile by completion of the Gem Oil Co. No. 1 Smith, in Lot 22, section 47. Marking the second producer in the new field, the Gem well was brought in for an estimated 150 bbls. per day through an eighth-inch choke. Oil sand was encountered at 6,649-53 feet, the latter being corrected total depth. Fifty per cent of the flow was wash water at first, and pressures ran 750 pounds on tubing and 1,250 pounds on casing. Drilling in this field took a decided spurt during the week, as Humble Oil & Refining Co. began moving in rigs for four tests. Of the two tests in the field on or approaching the sand, one, Barnsdall Oil Co. and Flour Bluff Corp. No. 2 Phillips, was bottomed at 6,641 feet. Drill stem tests attempted at 6,575-6,629 feet failed when seats gave away, and the well was to be tested again at the new total depth at latest reports. The Costa Oil Co. No. 1 Henderson coring at 6,500 feet was expecting the sand shortly.

Deep Saxet Well

Increased production in a deep Saxet well during the week improved indications of new oil production in a horizon heretofore producing gas and distillate primarily. W. W. Chapman No. 4 Morgan-Clark, in the northeast quarter of Survey 405, gauged 192.48 bbls. per day of oil, after several days of flow. The well was completed recently from sand at 6,268-86 feet, making 58.5-gravity gasoline and considerable gas. This may incite play in a new and still deeper sand than the now leading 5,800-foot pay, and add a new horizon to Saxet, already prolific with producing sands.

Nine new wells were brought in to production in the Saxet pool during the week, eight of which were Frio or 5,800-foot producers and the remaining one a 4,400-foot well. One test was abandoned in Survey 405 limiting production for the 5,800-foot sand on the western edge of the field.

Saxet Heights

The Saxet Heights or Corpus Christi field saw continued falling off of drilling activity during the week. Comparatively few tests are active in this area considering the volume of drilling which formerly developed the field. Four completions were reported for Saxet Heights over the past week, and fewer new tests were begun.

The Clara Driscoll field had indications of a substantial extension to production as Wellington Oil Co. (Santa Clara Oil Co.) No. 1-A Sevier located approximately 2,200 feet south of No. 3 Sevier, tested oil in the sand of the field. At 3,812-17 feet the test showed recovery of 2,000 feet of oil with some sand in 15 minutes, and operators were running casing for early completion. Wellington has staked five new locations for the field, which will probably be drilled consecutively. Beside that company's operations two other operators were approaching the sand in as many tests.

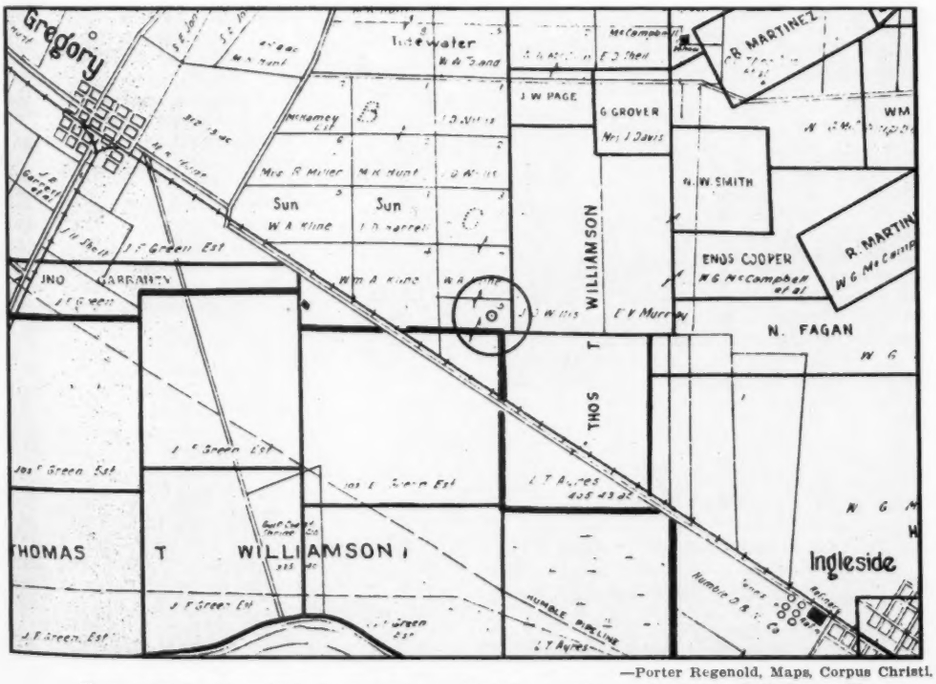
The outlook for possible deep production north of the White Point field in San Patricio County was darkened during the week by the failure of Trinity Drillers No. 1 W. C. Mayfield. That test, located in Lot 11, of the Roos Subdivision was carried to a contract depth of 6,010 feet and was abandoned without shows. To the south in the gas field itself, Earl Calloway No. 1 White Point Development Co. showed good indications of deep oil discovery. In a sand body of 73 feet topped at 4,900 feet oil saturation was shown on an electrical survey. The test was being carried deeper, at latest reports below 5,850 feet.

Elsewhere in the county, the Plymouth Oil Co. No. 2-D Welder near the Sinton field was abandoned at a total depth of 6,500 feet. During the drilling of this test, a good looking sand was cored at 5,533-41 feet but was not successfully tested. The Plymouth field recorded several completions during the past week. Centennial Oil Co., Humble Oil & Refining Co., each completed one new producer and Plymouth Oil Co. brought in two. In the Taft field to the south of Plymouth, two tests were on the upper 3,900-foot sand approaching completion and two additional wells, one of which is a rework job were on the deeper 4,900-foot sand.

Scattered Failures

Scattered failures and shows occurred throughout the section comprising Southwest Texas. In McMullen County, Magnolia Petroleum Co. No. 1 Teal and Darby Petroleum Corp. No. 1-A Hagist were abandoned. Intrepid Oil Co. and R. S. Bolling each abandoned tests in Duval and Webb Counties respectively. More encouraging results were obtained in Jim Wells and Kleberg Counties. In the former, R. A. Graddy No. 1 Bennett was reported to have made 280 feet of 20.6 gravity oil from sand cored at 2,343-65 feet and casing was to be run. The Kleberg attraction was Clarks No. 1

(Continued on Page 74)



—Porter Regenold, Maps, Corpus Christi.

Eleanor Oil Co. No. 1 Kline is attracting considerable attention on the Lower Gulf Coast. The wildcat, midway between Gregory and Ingleside in San Patricio County, has been electrically surveyed at 6,650 feet and casing is reported to have been run

Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, Sept. 26.—Thirty-three wells were completed in the Central West fields this past seven days, six gas wells, seven dry holes, and 18 oil producers with a total new production of 1,123 bbls.

The Livermore pool, in McLean County, Kentucky, continues to be the most productive field in the Central West, and extensive development work is underway in that area. More than 50 wells are being drilled in the pool and locations have been made for many more to be started in the near future. Every available piece of land in the town of Livermore is under lease and wells are being drilled in the back and side yards of residential and business buildings and there is a scramble to secure leases in and around the present boundaries of the field.

The Livermore pool had been extended across the Green River, into Ohio County, by the Lion Oil Co. No. 1 Livermore Ferry Co., but as the land on which the well is located will be under 2 or 3 feet of water during the flood seasons, there has been very little development on it.

The Louisville Gas & Electric Co., however, completed a 200-bbl. well on the C. S. Conrad farm, in the Bates Knob district, about 7 miles across Green River from Livermore, and operators lost no time in leasing all available property in that area. Two wells have been started by Fredrick Heldt of Chicago, one of them 300 feet from the Conrad well. The other well, a short distance away, had a good show of oil at 280 feet and made 150,000 feet of gas at 395 feet and is being drilled to the Barlow sand. Although the Barlow is the producing sand of this field, gas has been found in commercial quantities in the Jones sand, above the Barlow, and also in the Jett sand.

The majority of producers in this section have a flush production of from 75 to 200 bbls., but invariably settle down to a daily production far below these figures. A great deal of the crude from this pool is trucked to refineries in Kentucky and Tennessee, but the majority of it is gathered at the storage tanks by the Illinois Pipe Line Co., Union Pipe Line Co., Fordsville Gathering Line and the Producers Pipe Line Co. of Owensboro.

The Sunflower Oil & Gas Co. No. 1 Allen Kidd was completed in the Barlow sand and had a production of 90 bbls. the first 24 hours. It was drilled so close to the Atherton & Kidd mill in Livermore that a section of sheeting from the side of the mill had to be removed to run a belt from the gas engine to the drilling rig. On the Agnes Wright lot, on Sixth Street, Hoosier Drilling Co. No. 1 was completed at 30 feet in the Barlow sand at 1,306 feet and had an initial production of 100 bbls. after a shot. The same operators have rig up on the Judge Newton property, Sixth and Main Streets. Clark & Snyder, on the Mattox lot in Seventh Street, produced 50 bbls. the first 24 hours. The Troy Refining Co. is moving a rig on the Rowan lot. Tony Barret & Co. have a rig on the Will Howard lot and are drilling on the Davis lot in this same part of town. On the Bryant lease, J. C. Miller is down 629 feet. On the Mary Wilson property W. E. Hupp & Co. No. 3 had a production of 75 bbls. the first 24 hours after a shot. In the same district, Staves Drilling Co. No. 1, on the Snell lot, had an initial production of 50 bbls. J. C. Ellis No. 3 Forest Howard was a dry hole. On the Jack Kalesinger town lot, Lion Oil Co. No. 1 started at 50 bbls. a day. W. E. Hupp & Co. No. 2 Marvin Hackett had a production of 15 bbls. the first 24 hours after a shot. On the J. Henniger lease Barret & Leeper No. 1 started at 75 bbls. a day.

In the same county, near Calhoun, Ohio Oil Co. No. 10 G. B. McManana had a production of 100 bbls. the first 24 hours after a shot.

In Ohio County, in the Dundee pool, Kentucky Natural Gas Co. No. 12 L. C. Powers had an initial production of 25 bbls. after a shot. The same company has a rig up on this farm for No. 14, and No. 13 is being completed. In the same pool, Dundee Valley Oil & Gas Co. No. 7 D. Renfrow was a dry hole. J. B. Dinning No. 1 John Johnson was also a "duster" in this same section.

In Hancock County, Jay Petroleum Co. is completing a well near Lyonia, which has a very good show of gas.

Lima Field

The N. L. Steven test on the Fred Brinkman farm, 4 miles southeast of Wauseon, in Fulton County, which was reported last week as gauging 44,000 feet of gas and estimated as a 5-bbl. producer, blew down to 8,000 feet of gas and filled up with water and has been abandoned. The rig has been moved to another location on this farm and another test is to be drilled.

In Seneca County, section 29, Liberty Township, Tiffin Industrial Gas Co. No. 3 Henry Nye was drilled through the Clinton sand at 414-60 feet and gauged 12,000 feet of gas naturally. In section 4, Hopewell Township, Harpster & Co. No. 2 H. Sandelback is fishing at 400 feet. In section 3, Bloom Township, O'Brien & Co. No. 1 J. Ditterman is down 1,900 feet.

Coyle & Temple No. 9 H. Billhardt, section 28, Crane Township, Wyandot County, was completed below the sand at 1,360-65 feet and made 30,000 feet of gas and 7 bbls. of oil the first 24 hours after a shot. In section 16, Tymochtee Township, O. Wiegel No. 1 Irene Cupp is fishing at 1,373 feet.

In Putnam County, section 27, Blanchard Township, C. K. Rodgers No. 1 H. Labe is down 680 feet.

CENTRAL OHIO

Five oil producers, two dry holes and four gas wells were completed in the Central Ohio field this past week and extensive development work is underway in the district. In Coshocton County, section 17, Perry Township, Preston Oil Co. No. 4 Cary D. Harris, which was completed below the sand at 3,100-59 feet, produced 90 bbls. the first 24 hours after a shot. The same operators are down 400 feet on the Evert Vanwinkle lease in the same section. In section 16, same township, Preston Oil Co. No. 3 Grace McCament was drilled through the sand at 3,178-3,226 feet and produced 34 bbls. the first 24 hours after shot. In section 9, Tiverton Township, H. E. Perkins & Co. No. 1 W. W. Smith, which was reported as making three-quarters of a barrel in the sand at 3,094-3,114 feet, was drilled through the second Clinton at 3,123-38 feet and gauged 786,000 feet of gas after a shot.

In Ashland County, Lot 84, Sullivan Township, Ohio Fuel Gas Co. No. 1 D. E. Shank was completed below the Clinton sand at 2,636-45 feet and was a commercial gas well. In Lot 51 the same company is completing the No. 1 on the E. C. Johnson property. In section 22, Mohican Township, Ohio Fuel Gas Co. is down 180 feet on the R. E. Spahr lease.

William Dempsey has staked a new location on the Melvin Barrows farm in section 11, Avon Township, Lorain County. In section 28, Ohio Fuel Gas Co. is down 2,270 feet on the John Schober lease and the same operators are completing No. 1 on the H. B. Belden property, in Lot 56, Grafton Township.

In Summit County, section 9, Twinsburg Township, Brooks Johnson No. 1 Stevenson & Pendergast was drilled through the shale at 670-80 feet and gauged 27,000 feet of gas, which has been shut in on casing and sold to a farmer in that vicinity. In section 36, Franklin Township, East Ohio Gas Co. No. 1 Charles Daily has been shut down at 3,500 feet and the same operators are completing on the Freeman Daily lease, in section 31, Green Township. In section 8, Green Township, East Ohio Gas Co. No. 2 John Beese has blown down to 60,000 feet of gas and has been plugged.

L. F. McGrath No. 1 Bradford & Averill, in Cleveland Township, Cuyahoga County, has been shut down at 1,650 feet for casing. Tract 3, Olmsted Township, Ohio Fuel Gas Co. is spudding on the F. W. Muche property.

In Stark County, section 6, Jackson Township, McFarland & Co. No. 3 S. & M. Killinger was completed below the Clinton sand at 4,020-4,102 feet, gauged 94,000 feet of gas and has been plugged. In section 2, same township, East Ohio Gas Co. is moving a rig on the M. Carlson location. Same operator's No. 1 C. H. Rudy is down 200 feet and has a crooked hole, in section 9. In Plain Township, section 21, Lyons & Co. has a rig up on the John Fasnacht location. Ohio Fuel Gas Co. No. 6 Elizabeth Harmount, section 28, Jackson Township, is down 200 feet and also has a crooked hole. In section 5 the same operators are down 1,200 feet on the Philip Neidert property.

In Richland County, section 34, Mifflin Township, Harmon & George No. 1 Ray Shook was drilled 2,800 feet without finding the sand and has been abandoned as a dry hole. In section 25, Worthington Township, Ohio Fuel Gas Co. No. 1 Frances Bowen is down 1,547 feet.

Bachelor & Co. No. 8 Marie Yarnell, location 2, Windsor Township, Morgan County, was drilled through the First Cow Run sand at 625-48 feet to a total depth of 655 feet and produced 3 bbls. the first 24 hours after a shot. Same location, Mosier & Co. No. 32 Charles Yarnell has been drilled through the First Cow Run sand and has a good show of oil and will be shot. In Marion Township, section 8, Metcalf & Co. No. 3 Louisa Worthington topped the First Cow Run sand at 476 feet and was drilled to a total depth of 500 feet. It was shot with 20 quarts and produced 2 bbls. the first 24 hours. Section 12, same township, Penn Contracting Co. is down 425 feet on the Ward W. White lease. In section 1, Homer Township, Southland Oil Co. No. 24 Edward North has resumed drilling and is down 400 feet.

In Tuscarawas County, section 21, Clay Township, George Jewell has staked a location on the Frank B. Kinsey property and a rig is being built. In section 2, same township, Ohio Fuel Gas Co. No. 1 Ben B. Carotheral topped the Berea sand at 1,184 feet and has a small show of oil and gas. In section 14, Sandy Township, Frank Lyons is down 450 feet on the Katherine Belden lease. In the same township, Lot 2, James Upham is down 4,600 feet on the A. C. Ehler property.

Griffin Producing Co. No. 2 Abram Mohler, section 30, Green Township, Hocking County, gauged 225,000 feet of gas in the Clinton sand and may be shot. In section 19, Ward Township, Kachelmacher No. 4 Nelsonville Coal & Land Co. had a small show of oil in the top Berea sand at 964 feet and is broken down at 983 feet.

In Perry County, section 5, Harrison Township, Preston Oil Co. No. 1,611 William Combs was drilled through the Clinton sand at 3,618-34 feet and gauged 900,000 feet of gas and swabbed 7 bbls. of oil the first 24 hours after a shot. In section 14, Reading Township, Perry Strum No. 2 Alice King is down 2,784 feet and in section 4 Hopewell Gas & Fuel Co. is down 2,400 feet on the Thornton Baker lease. Foraker & Co. is building a rig on the Herbert A. Wise location in section 15, Bearfield Township. In section 25, Coal Township, Kachelmacher Estate No. 15 Hemlock Coal Co. was a dry hole. In section 35, Preston Oil Co. No. 141 Sunday Creek Coal Co. is down 700 feet.

In Fairfield County, section 4, Pleasant Township, City Natural Gas Works is down 900 feet on the Samuel Wertz lease, and in section 22, Berne Township, the same operators are rigged up on the L. J. Knecht location.

ILLINOIS

A wildcat test, drilled by a group of Kentucky operators on the Bussellmann farm near the Gulf Pipe Line station, southeast of Breese, Ill., in Clinton County, was drilled to a total depth of 1,100 feet and was dry.

In the Bartelso pool, Santa Fe Township, same county, Ohio Oil Co. No. 3, on the Widow Trame farm, one location north of No. 2 Trame, was drilled 2 feet through the sand, which

was topped at 988 feet, and shut down. The next day oil started flowing over the top of the casing and at present the well has a natural flow of 24 bbls. a day and, according to conservative estimates, it will produce 150 bbls. a day when put on the pump. The same company has staked a location for No. 4 as an offset for No. 1 on this farm and operations have been started on this well. McGaffigan, Fischer and others No. 2 Van Deloo was reported good for 100 bbls. initially at a total depth of 1,067 feet.

INDIANA

One gas well and one dry hole were completed in the Indiana field this past seven days. In Pike County, section 23, Jefferson Township, Claud Trusler No. 1, on the Craig heirs property, 10 miles east of Petersburg, was completed below the sand at 669 feet and gauged 800,000 feet of gas, with a rock pressure of 250 pounds. In section 2, Logan Township, Premium Finance Co. No. 1 Willie Huey is being completed and in section 32, Clay Township, Harry Hanson is "drilling in" on the Jesse Campbell property.

In Daviess County, section 34, Barr Township National Consumers Oil Co. No. 1 W. E. Gough was drilled to 600 feet and is a dry hole.

In Spencer County, section 1, Huff Township, T. F. Seitz No. 1 Carl Gengelbach is down 600 feet.

Siosi Oil Corp. is drilling on the F. Williams property in section 32, Prairie Creek Township, Vigo County.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Sept. 26.—In the Forest Reserve area west of Olds, Alberta, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, has encountered shows of oil and gas in the lower Kootenay formation and is deepening in a hard gray sand below 5,941 feet. The structure, north and west of Calgary, was geologized by Campbell Hunter, of London, England, and the test is being financed largely by British capital. Commercial production is possible in the Madison limestone. The test recently changed from cable to rotary tools for the deeper drilling.

South Turner Valley

In South Turner Valley, Union-Freehold Oil Corp. No. 1, LSD 8, section 21-18-2w5, bottoming in the Madison lime at 6,462 feet, has been shot. The test got the lime at 5,595 feet and at 6,261 feet showed only 25 bbls. naphtha recovery. It was deepened and a fault drilled into at 6,440 feet. Results of the shot have not been determined. A half mile farther south, Highwood-Sarcee Oils No. 2, LSD 1, same section, is testing production from the lime.

Farther north, W. A. Preston and associates No. 1 Rand, S half LSD 5, section 34-18-2w5, has cleaned out and is deepening from 3,790 feet.

West Side Operations

On the west side of the Turner Valley structure, Dalhousie Oil Co. No. 8, LSD 6, section 30-19-2w5, is below 956 feet. Location is south and west of the other Dalhousie wells in the same section, of which No. 5 in LSD 16 is a light crude producer from the Dalhousie sand at 4,900 feet and No. 7, LSD 9, a naphtha producer from the lime at 5,339 feet.

Sterling Pacific No. 3, LSD 13, section 33-18-2w5, is below 5,406 feet. Sterling Pacific No. 4, LSD 4, same section, is below 2,395 feet.

South of Turner Valley Royalties No. 1 producer, B. & B. Co. No. 1, LSD 12, section 28-18-2w5, is below 1,700 feet. Renfrew Royalties No. 1 Morris & Goodfellow, LSD 3, same section, is deepening in the lime below 6,025 feet. Sunburst-Mid Royal No. 1, LSD 14, same section, is rigging to resume from about 1,700 feet. F. D. Lundy and associates of Vancouver will complete the test which has been standing for several years.

In section 21-18-2w5, Sovereign Royalties No. 1 Myers & Wright, LSD 14, got the Dalhousie sand at 5,446 feet and is deepening. It is expected to get the Madison limestone at 5,900 feet. Newfold Royalties No. 1, LSD 11, rotary test, has spudded and is below 310 feet.

In the SW cor. section 21-18-2w5, Fundation Royalties No. 1, LSD 5, is in hard formation below 5,760 feet with the lime expected below 6,200 feet. It got the Home sand between 5,495 and 5,514 feet and a strong gas flow 70 feet lower. Heavy duty rotary is being used with John Sherman in charge of operations. West Side Royalties No. 1, LSD 3, same section, is preparing to resume with rotary outfit from 2,477 feet.

Tests in Foothills

On the Kootenay dome structure west of Calgary, Roxana Petroleum No. 1, section 8-24-7w5, is cementing casing 23 feet in the lime at 970 feet.

On the Birch Ridge structure, Elbow Oils No. 1, LSD 11, section 35-22-5w5, is below 4,600 feet. On the Moose dome, Moose Oils No. 2, LSD 8, section 29-22-6w5, is running one tour and drilling below 626 feet with hole full of water to control the gas flow.

On the Highwood-Sinclair structure southwest of Turner Valley, Maple Leaf Royalties No. 1 Banner, LSD 6, section 34-17-3w5, has resumed from 2,720 feet. Farther south, Pekisko Hills Co. No. 1, LSD 6, section 6-17-2w5, on the Pekisko structure, is drilling in Banff shales below 4,335 feet after getting a small oil show at 4,280 feet.

Watson Structure

On the Watson structure, north and west of Lundbreck, Mar Jon Oil Co. No. 3, LSD 3, section 4-10-2w5, has installed control head and is drilling out cement at 5,170 feet. Some gas was struck at 3,860 feet and at 4,420 feet a heavy flow which lifted the 5-inch stem 1,000 feet in the hole. An oil show was met at 4,850 feet and more gas and oil in a dark sand of the lower Blairmore below 5,140 feet.

In the Waterton Lakes Park area, Oil City Royalties No. 1, section 30-1-30w4, is underreaming to 2,501 feet.

Pouce Coupe Operations

In the northern Alberta foothills, preliminary work is being done in the Pouce Coupe district where Canada Empire Crude Oil Syndicate, headed by James I. Hill of Calgary, has exploration rights on approximately 50,000 acres in Township 80, Ranges 11, 12 and 13w6.

Northwest Co. No. 1, LSD 7, section 26-80-13w6, has been burning wide open for several weeks. Bottoming at 3,057 feet, it had gas flows from five horizons with aggregate open flow estimated at 10,000,000 feet a day, and has been shut in since 1923.

High River—Aldersyde

In the High River-Aldersyde area east of Turner Valley, Arca Development Corp. No. 1, NW quarter section 24-18-1w5, has resumed after cementing casing at 6,505 feet. The potential producing horizon is between 7,000 and 8,000 feet. Farther north and east, on the Aldersyde structure, Ranchmen's Gas & Oil Co. No. 1, LSD 16, section 13-20-29w4, is deepening in brown sand below 6,875 feet with continued gas and oil showings. Farther north on the New Valley structure, McLeod Oil Co. No. 1, LSD 4, section 6-21-2w5, is below 6,165 feet.

Border Fields

On the Comrey structure, southeastern Alberta, McDougall-McLeod Oil Co. No. 1, section 9-1-5w4, has been abandoned after deepening in the lime to below 3,850 feet. It got the lime at 3,540 feet but encountered water.

On the Twin River structure, south of Lethbridge, Del Bonita Associated Oils No. 3, LSD 9, section 10-2-20w5, is resuming from 351 feet after completing a water well.

On the Del Bonita structure, Sunshine Oils No. 1, LSD 10, section 19-1-21w4, is coring below 4,640 feet, after encountering strong gas shows close to the Sunburst sand. It is planned to give the Sunburst a thorough test before deepening to the Ellis-Madison contact. Home Oil Co. of Vancouver, which some years ago pioneered the South Turner Valley development, has taken a stock interest in the Sunshine company.

Clearwater Test

In the Clearwater district, north of McMurray, Waterways Oils, Ltd., of Edmonton has a test rigged up ready to spud.

Imperial-Nordon Development

Imperial Oil, Ltd., and Nordon Corp., Ltd., have entered into an agreement for the joint development of some 230,000 acres of potential oil lands lying between Lethbridge and the Montana boundary. A seismographic survey will be undertaken immediately of acreage held by the two companies, to be followed by drilling early in 1937.

Wainwright Field

In the Wainwright field, east-central Alberta, a seismographic outfit in charge of J. Hollister has started work on the Battleview anticline. Surveys are being carried on for Pacalta Oils, Ltd., and Vanalta, Ltd., of Vancouver, which are jointly interested in prospecting rights in this area. As soon as the seismographic work is completed, a series of deep tests will be started.

British Columbia Operations

In the Flathead Valley, southeastern British Columbia, Columbia Oils No. 1 is below 4,910 feet with considerable oil showing in the drilling mud and strong gas pressure. It resumed recently from 4,836 feet after installing Doheny Stone diesel-power outfit with 122-foot steel derrick. The well is being drilled on a contract basis at $16 a foot to 6,000 feet and $19 a foot to 7,000 feet. Fuel storage for 300 days' operations has been provided. The best run since resumption has been 19 feet a day.

Ontario Operations

In Ontario, Syd Bird and associates of Toronto are drilling below 600 feet on a test for oil in the southeast section of Manitoulin Island in Georgian Bay. The test is expected to get production in the Trenton limestone early in October.

In the Valetta section of the old Tilbury field, in Kent County, Walker & Drake No. 1, SE quarter lot 6, Concession 9, Tilbury East Township has been put on the pump and is making around 10 bbls. a day. No. 2 will be started next week on the same lot.

In the Dover field, Central Pipe Line Co. No. 4, John Jubenville farm, Lot 2, Front Concession, Dover West Township, is dismantling outfit, which will be moved to the Eden or Brownsville field for a new test. Central No. 4 had a small gas production after a shot in the Trenton at 3,360 feet, and may later be cleaned out and put on production.

In the Brownsville field, Oxford County, Aylmer Gas Co. No. 1 (H. McKechnie and associates), Lot 23, Concession 12, Dereham Township, finished with a flow around 1,500,000 feet a day from the upper sand at 923 feet. Location was in the same lot as the Aloka discovery wells but a little farther south, and the sand was about 15 feet deeper. Armand Smith No. 2, Lot 22, Concession 11, Dereham Township, about 400 feet north of the M.C.R. tracks, is below 700 feet. Aloka Oil & Gas Co. No. 4 (W. J. Hussey & Son) Lot 24, Concession 12, west of the discovery well, is rigging.

In the Eden field, Elgin County, Culver Syndicate No. 2, F. A. Alleman farm, Lot 23, Concession 7, Bayham Township, finished a dry hole in the Clinton at 1,365 feet. Eden Gas Co. (C. A. Simpson and associates) No. 1, Lot 20, Concession 8, drilled through 28 feet of Clinton and finished dry.

Olga Gas, Ltd., of Toronto has arranged to drill a test about 2 miles south and west of production in the Eden field. Work will start early in

(Continued on Page 96)

North Louisiana, Arkansas

By MITCHELL TUCKER

CONSERVATION AGENT WILL SUPERVISE RODESSA FIELD

SHREVEPORT, La., Sept. 26.—The staking of 41 new locations during the week featured the news from the Ark-La-Tex area. Twenty-three of these were in the Rodessa field, three as outpost tests and 20 for further development of proven properties. Seventeen of the Rodessa locations are in the Cass County, Texas, side of the field.

A new high for production in the Rodessa field was set for the week ending September 23, averaging 72,236 bbls. daily. The Louisiana side of the field flowed 59,111 bbls. per day while the Texas side accounted for 13,125 bbls. daily.

Conservation Agent Appointed

The conservation program at Rodessa made another step forward when the first conservation agent was appointed to supervise the commission's orders in the Rodessa field. W. F. Chisholm, of Shreveport, was appointed to this post. All operators are pinching in their wells to conform to the recent gas-oil ratio restriction which permitted oil wells to have a maximum ratio of 12,500 cubic feet per barrel of oil and gas-distillate wells to have a maximum 25,000-cubic-foot ratio. Regent Oil Co. No. 1 Tyson, section 24-23-16, was the first to report a loss of daily production under this restriction. Reported to be making 210 bbls. of distillate and 54,000,000 feet of gas previously, when cut back to the allowed ratio, the well is now making about 35 bbls. of distillate per day.

Eastern Outposts

The southern edge of Miller County, Arkansas, about 1 mile north of Ida, La., seems to be assured of another test to determine if the Rodessa reservoir does not extend into Arkansas. H. H. Temple, Shreveport, announced his intention to drill in the southwest corner of the east fractional half of section 15-20s-27w, Arkansas, for a test of the Rodessa horizons. This will be a 2¼-mile extension from present production.

One other well has been drilled to the Rodessa horizon in Arkansas, Haynes No. 1 Embree, SW SW SW section 9-20-28, about one year ago, but was found to be dry as it was situated too low on the plunging anticlinal structure.

Disregarding the theory that the Rodessa fault runs just south of the town of Ida, David L. Harlin has staked location for his No. 1 W. D. Norton in the NW cor. of section 22-23-15 about 2 miles southwest of Ida, and 1½ miles south of present production. Findings of this well will bear close watching.

The most important eastern extension well drilling, Red Iron Drilling Co. No. 1 Means, NE cor. section 9-23-15, gave signs of being a producer this week when the Hill and Gloyd sands both carried saturation. Operators are now coring for top of the Young at 5,933 feet.

Western Extensions

Bay Oil Co. made location for No. 1 G. E. Parker during the week and have set 9-inch casing at 2,095 feet. This test is located in the southeastern corner of the Greenham Survey, about 2 miles due north of present production just west of the Texas-Louisiana state line. Results of this well will aid in determining the presence of another major fault parallel to the known Rodessa fault to the south.

Fourteen miles southwest of present production, and 1 mile north of Jefferson, Tex., Overlease and others of Oklahoma City have announced intentions to drill a Rodessa test on the Lizzie Henderson tract, R. Bennington Survey. It is reported that several major companies are making dry hole contributions to this test.

Daily Average Production

Estimated daily gross production all companies week ending September 25, 1936:

NORTH LOUISIANA

Bellevue	850
Caddo light	4,050
Caddo heavy	2,605
Converse	825
Cotton Valley heavy	280
Cotton Valley light	620
De Soto and Red River	1,465
Elm Grove	400
Haynesville	3,375
Holly	140
Homer	2,580
Pleasant Hill	140
Rodessa	59,110
Sarepta-Carterville	410
Urania	3,010
Zwolle	985
Total	80,845

SOUTH ARKANSAS

Champagnolle	2,220
El Dorado	2,100
Lisbon	295
Miller County	665
Nevada	860
Smackover light	2,205
Smackover heavy	17,410
Stephens	590
Urbana	1,660
Total	28,005

Texas side of Rodessa field—13,055 bbls. daily.

Rodessa Completions

Rodessa completions for the week were as follows:

Blackwell Oil & Gas Co. No. 1 Wynn, SW SE NE section 8-23-15, flowed 12 bbls. per hour through one-quarter inch tubing choke, tubing pressure 1,200 pounds, casing pressure 1,500 pounds, saturation topped 5,954 feet, total depth 6,095 feet.

Phillips Petroleum Co. No. 4 Adams, SE NE NW, section 17-23-15, flowed 22 bbls. per hour through 11/32-inch tubing choke, tubing pressure 300 pounds, casing pressure 700 pounds, saturation topped 6,040 feet, total depth 6,060 feet.

Reinke and others No. 1 Fitts, NW SW NW section 23-23-16, flowed 12 bbls. per hour through one-quarter inch tubing choke, tubing pressure 300 pounds, casing pressure 800 pounds, saturation topped 5,960 feet, total depth 6,001 feet.

United Gas Co. No. 5 N. S. Spearman Unit, SW cor. section 7-23-15, flowed 37 bbls. per hour through three-eighths inch tubing choke, saturation topped 6,070 feet, total depth 6,077 feet.

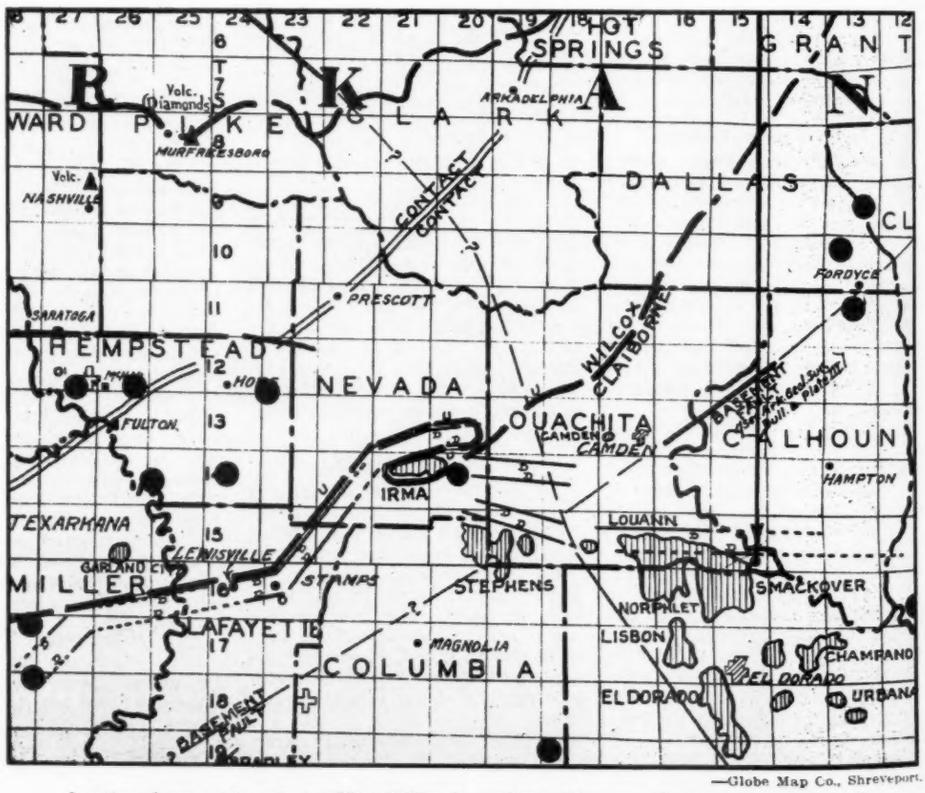
Magonlia Petroleum Co. No. 4 A. S. Hall, James Young Survey, Cass County, Texas, flowed 20 bbls. per hour through one-quarter inch tubing choke, saturation topped 6,050 feet, total depth 6,090 feet.

Magnolia Petroleum Co. No. 5 A. S. Hall, James Young Survey, flowed 22 bbls. per hour through one-quarter inch tubing choke, saturation topped 6,044 feet, total depth 6,070 feet.

Magnolia Petroleum Co. No. 7 A. S. Hall, James Young Survey, flowed 23 bbls. per hour through one-quarter inch tubing choke, saturation topped 6,049 feet, total depth 6,070 feet.

Magnolia Petroleum Co. No. 3 Rives, northeast corner John Collum Survey, flowed 12 bbls. per hour through one-eighth inch tubing choke, saturation topped 6,040 feet, total depth 6,068 feet.

Magnolia Petroleum Co. No. 4 Rives, northeast



—Globe Map Co., Shreveport.

Location of present important wildcat drilling in southern Arkansas, showing concentration of activity in Hempstead County. Map is part of Easton's index map

corner John Collum Survey, flowed 14 bbls. per hour through three-sixteenths inch tubing choke. saturation topped 6,029 feet, total depth 6,047 feet.

Superior Oil Co. No. 4-A-4, Robert Trammel Survey, flowed 17 bbls. per hour initially through one-quarter inch tubing choke, casing pressure 700 pounds, gas-oil ratio 630 to 1, saturation topped 5,972 feet, total depth 5,992 feet.

United Gas Co. No. 6 J. T. Stewart, John Collum Survey, flowed 32 bbls. per hour through one-half inch tubing choke, tubing pressure 210 pounds. casing pressure 475 pounds, total depth 6,040 feet.

Bienville Parish

M. W. McDowell No. 1 Loche, section 9-15-10w, near Lake Bistineau, which has been standing for some time, spudded in this week for a 6,000-foot test of the 4,000-acre block surrounding the location on a reported geophysical high.

Bossier Parish

Arkansas-Louisiana Gas Co. has begun construction of its absorption gasoline plant in the Sligo field, where it contemplates drilling additional wells soon.

Triangle Drilling Co. completed No. 1 Skannal Unit, SE cor. section 23-17-12, as a gas well gauging 4,000,000 feet through open tubing, with rock pressure of 975 pounds. Total depth 5,350 feet, plugged back from 5,696 feet. Production is from the Pettit sand.

Premier Investment Co. No. 29 Wyche, NW cor. section 14-19-11, was a routine completion in the Bellevue pool, total depth 426 feet, pumping 10 bbls. per day. Location was staked for No. 30 in the NE cor. section 14-19-11.

Caddo Parish

Stanolind Oil & Gas Co. No. 108 Dillon, NE NE section 14-21-15, was completed as a 25-bbl. daily pumper, total depth 1,680 feet, after acidizing.

Morefield & Prine No. 2 Stokeley, section 5-20-16, flowed 30 bbls. per day on completion test, total depth 951 feet.

Grant Parish

Rogers Oil Co. No. 1 Swope, SW NW SW section 17-9-1e, pumped 75 bbls. per day initially for another completion in the Urania field, total depth 1,604 feet.

Theo. Davis and others No. 1 Barrett, SW NE section 19-9-1e, was dry and abandoned at 1,710 feet.

Al Johnson and others No. 1 Brewster, NE NW NE section 18-9-1e, was abandoned at a total depth of 1,640 feet after testing dry.

LaSalle Parish

Adams Louisiana Corp. No. 1 Goodpine Lumber Co., section 12-6-2e, topped the Wilcox at 2,664 feet and was abandoned at a depth of 2,690 feet as a dry hole.

Morehouse-Union Parishes

Routine completions in the Monroe field numbered six for the week, having a total initial gauge of 60,000,000 feet, average rock pressures 750 pounds. Southern Carbon Co. made four new locations in the northern portion of the field in Union Parish.

Richland Parish

Gulf Refining Co.'s closely watched deep test of the Richland gas field, No. 15 R. R. Rhymes, section 32-17-6e, is now drilling in hard black sandy shale at 6,920 feet.

Sabine Parish

J. R. Keen No. 1 Long Bell Mining Corp., section 5-8-13, was swabbed following acidization and made about 150 bbls. daily. Operators are now waiting on construction of standard rig before making pumping test.

The deep Glen Rose test of the Converse pool, Cox & Whitehurst No. 1 Whitney Corp., section 8-9-13, continued to be the most closely watched wildcat in the North Louisiana territory this week. After flowing wild about 50,000,000 feet daily, with showings of distillate, the hole partially bridged and cut the flow to about 10,000,000 feet. It has been reported that the gas is showing continually increasing signs of oil. Eight-inch casing was cemented at 3,585 feet, and about 2,090 feet of open hole is now being carried. Operators plan to run 7-inch before making additional tests. Total depth is now 5,503 feet in Oolitic lime.

Webster Parish

Another test was staked in the Cotton Valley field, having the new Travis Peak sand member as its objective, United Gas Co. No. 2 Davis, NW cor. section 20-21-10.

Union Parish

Federal Petroleum Co. No. 1 fee, section 34-21-3e, important northwestern flank test of the Monroe gas field, remains the center of attraction in that part of the state. The stuck drill stem was shot in two at 2,550 feet, and after pulling it was found that the 9-inch casing had parted 187 feet from the top. One thousand sacks of Baroid were pumped into the hole, followed by large cement plug. Operators plan to drill out the plug and fish for remainder of drill pipe. The well had blown out at 7,021 feet, total depth, with an estimated 5,000,000-foot gas flow with hot salt water, causing drill stem to stick. It is now thought that the salt water is coming from around the parted 9-inch casing, and the present showing appears much more attractive than before.

ARKANSAS

Hempstead County

Activity in Hempstead County holds the center of attention in Arkansas now, as five tests are drilling to check possibilities of shore line accumulation in the Travis Peak and lower formations here.

Imperial Oil & Gas Products No. 1 Foster, section 35-12-26, topped the anhydrite at 2,012 feet, and is now drilling below 2,250 feet. F. W. Martin No. 2 Lafferty, section 17-14-24, is now preparing to run 4½-inch casing at 2,443 feet and test showings encountered in a sand thought to correspond

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with the Woodbine. Stewart Oil Co. No. 1 fee, section 31-12-23, is drilling at 500 feet for a Travis Peak test, while Lewis Hays No. 2 State of Arkansas is rigging up to drill in the SE cor. of section 18-24-25, in the bed of Red River.

H. D. Easton and others No. 2 Conway Tiller, section 34-12-27, are coring in lower Glen Rose at 2,852 feet after encountering heavy gas showings near the base of the Middle Glen Rose (anhydrite). Substantial oil showings were also noted in the shallow chalk zone. It is planned to thoroughly test the upper Paleozoic beds in this well.

Leasing in this sector remains quite active as H. D. Easton and May continue to add to their block centering around section 27-13-26, near Fulton, now totaling about 9,000 acres. Imperial Oil & Gas Products Co. has a new 8,000-acre block just west of Hope, in Townships 12 and 13s, Ranges 24 and 25w. The Root Petroleum Co. continues to sponsor a seismograph crew near Hope, and another unidentified crew is in the area.

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Miller County

Odell Hinson No. 1 Montana Realty Co., NE NW NW section 3-17-28, topped the base of the massive anhydrite at 5,001 feet and is coring below 5,020 feet, without testing oil showings observed from 4,632 to 4,664 feet.

Nevada County

Benedum & Trees Oil Co. No. 1 Groves, SE NW section 10-14-20, was the center of interest this week while testing. On drill stem test 9 joints of salt water, 3 joints of heavy oil and 30,000,000 feet of gas were observed at 1,285 feet. Operators now have cemented 10-inch casing at 1,310 feet. This well is located just outside of production in the old Irma field, and is planned for a 6,000-foot test. Operators will move in small rig and drill another hole to test these shallow showings.

Ouachita County

Phillips Petroleum Co. No. 1 Arnold, NW NE of section 27-15-15, was completed this week in the Reynolds lime (Permian) flowing 70 bbls. of oil, 15 bbls. salt water, and 2,000,000 feet of gas through one-half inch tubing choke, casing pressure 950 pounds, tubing pressure 850 pounds, total depth 4,944 feet. This well was formerly drilled to 5,708 feet to thoroughly test the big lime here, but after failing to develop production, was plugged back to its present depth of 4,944 feet.

MISSISSIPPI

State of Mississippi No. 3 fee, section 25-6n-1e, is estimated to be a 50,000,000-foot gas well, rock pressure 475 pounds, flowing through 1¼-inch tubing choke, from total depth of 1,107 feet. Rig is being moved in for No. 4 fee, to be located in the center of the north half of section 35-6n-1e.

C. B. Pennington of Baton Rouge has assembled about 20,000 acres in southwestern Mississippi, centering in Township 2, Range 2w, Wilkinson County. Tide Water Oil Co. is sponsoring a seismograph crew in the western part of this same county.

EAST TEXAS (Border Counties)

Panola County

The area immediately north and east of Carthage, Panola County, Texas, remained the most active leasing and trading area in the Ark-La-Tex territory throughout the week, following attractive cores showing good porosity and saturation in the lower Glen Rose at A. C. Glassell No. 1 Frost Industries, Mary Potts Survey. This well had 11 per cent saturation and 26 per cent porosity in the bottom of a core taken at about 5,100 feet, in Oolitic and Coquina lime. High-pressure gas and distillate showings were also logged just above 5,675 feet.

Within a radius of 5 or 6 miles, east of Carthage, five important deep tests are either drilling or contemplated in the immediate future. The presence of a desirable zone of porosity with attractive saturation in the Glen Rose here has stimulated much interest, as major companies continue to assemble acreage in the general area. Arkansas Fuel Oil Co.'s purchases approximated $40,000, while Humble, Skelly, Shell, Hunt, Magnolia, Sun, Gulf, Mid-Continent, Kirby, Devonian, and Continental have been adding to their holdings.

The Arkansas Fuel Oil Co. has two seismograph crews in the area, one northwest of Carthage on the Joseph Spencer Survey; another on the W. D. Thompson and George Goodwin Surveys. Amerada continues to detail along the Shelby County line, west of Joaquin. Sinclair Prairie is working in the southeast corner of the county, while Sun has a crew immediately around the Glassell test on the Mary Potts Survey.

Southwest Texas Fields

(Continued from Page 69)

Kivlin near Kingsville, which was standing with about 1,500 feet of oil in the hole according to reports.

Activity in the Laredo district was centered in the usual few fields, although drilling is carried on throughout the area. The Loma Novia, Seven Sisters and Lopez fields scored 4, 4 and 10 completions respectively, and the shallow Haynes field of Zapata County gained five new producers. In the O'Hern field considerable interest was manifest in increased production from two recently completed wells. Hamill and Smith No. 8 Benavides and Reed No. 2 S. Benavides were making greater than 100 bbls. per hour through open tubing from the regular sand of the field. This may lead to considerable additional drilling in the vicinity of these tests.

To Study Pearsall Field

SAN ANTONIO, Tex., Sept. 28.—The annual field trip of the San Antonio Geological Society to be held October 16 and 17, will be devoted to a study of the Claiborne formation in Atascosa, Frio, Zavalla and Dimmitt Counties. Starting at Pleasanton, the route will be through Jourdanton, Charlotte, Pearsall, Loma Vista, Carrizo Springs and Eagle Pass. In Frio County, the Pearsall field will be studied. The technical session will be held in Eagle Pass on Saturday, October 17.

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Rocky Mountain Area

By T. R. INGRAM

ABANDONS IMPORTANT EAST COLORADO TEST IN GRANITE

DENVER, Colo., Sept. 29.—Colorado had a disappointment this week when the Indian Territory Illuminating Oil Co. Beecher Island test in Yuma County, hit granite and was abandoned at 5,595 feet. The Continental Oil Co. No. 1 Henderson, on the Thornburg dome, Moffat County, has saturation in the Sundance sand and may open a new pool. Rumors credit the Mountain Fuel Supply Co. with an oil discovery on Powder Wash.

In Wyoming, the Continental Oil Co. No. 4-A Schuricht, Lance Creek field, flowed 5,233 bbls. of oil and 3,430,000 feet of gas in 24 hours. The Stock Oil Co. No. 1-X Allen, Garland field, flowed 500 bbls. a day and then stopped. Goshen County is scheduled for a wildcat play. Another test well is getting under way in Platte County.

The Montana-Dakota Utilities Co. test on the Baker-Glendive anticline in eastern Montana again is reported showing oil at close to 8,200 feet. Cut Bank had only one completion, an average well. There were four new operations. Kevin-Sunburst is showing an increased activity with six new locations and five completions.

NEW MEXICO

Eleven producers were completed in southeastern New Mexico, including four in the Monument area, five at Eunice, one elsewhere in Lea County and one in Eddy County.

The largest producer was Gulf Oil Corp. No. 10-C Arnott-Ramsey, C SW NE section 21-21-36, Eunice area. It flowed 480 bbls. of oil naturally, with 1,724,000 feet of gas, in eight hours. Top of pay was 3,805 feet; total depth 3,905 feet. Same operator's No. 3 Bell-State "C," C NE NW section 15-21-36, had pay at 3,785-87 feet, total depth, and flowed 192 bbls. naturally in eight hours. After acidizing, it flowed 250 bbls. in eight hours through tubing, with 3,840,000 feet of gas. Shell Petroleum Corp. No. 1-G State, C NE NW section 6-21-36, was completed at 3,867 feet, total depth; top of pay was 3,742 feet. It flowed 165 bbls. of oil naturally through tubing in four hours, with gas gauging 1,538,000 feet. Devonian Oil Co. No. 6 State-Heasley, C NE SW section 5-21-36, flowed 40 bbls. of oil in one hour after acidizing. Top of pay was 3,800 feet; total depth 3,862 feet. Continental Oil Co. No. 1-D-11 State, C NW SW section 11-21-36, had initial production of 25 bbls. of oil in one hour through three-fourths inch choke on tubing. Pay was topped at 3,874 feet; total depth 3,920 feet.

In the Monument field, Amerada Petroleum Corp. No. 2-A Phillips, section 31-19-37, had best pay at 3,800-11 feet and was completed at 3,905 feet, total depth. It had a natural flow of 154 bbls. of oil in 7½ hours through one-half inch choke on tubing. Gulf Oil Corp. No. 2 Martin, SE cor. section 25-19-36, topped pay at 3,835 feet and was bottomed at 3,955 feet. It flowed 220 bbls. of oil naturally in nine hours. Gas gauged 5,800,000 feet. Repollo Oil Co. No. 3-B Phillips, section 31-19-37, was completed in pay at 3,900-30 feet, total depth. It was acidized with 3,000 gallons and flowed 180 bbls. in 24 hours. After acidizing again with 5,000 gallons, it flowed 288 bbls. in 24 hours through choke. Humble Oil & Refining Co. No. 4 State-Aggies, C SE NW section 31-20-37, was acidized and flowed 22 bbls. of oil in one hour through choke on tubing. It topped pay at 3,740 feet; total depth 3,850 feet.

Texas Co. No. 1 E. Fanning, C SE NE section 4-24-37, was bottomed at 3,701 feet but was plugged back to 3,656 feet to complete. After shot, it pumped 25 bbls. in six hours.

The Eddy County completion was Grayburg Oil Co. No. 7 Burch, C NW NE section 19-17-30. After acid treatment, it flowed 343 bbls. of oil through tubing in 24 hours. tI had pay at 3,130-40 feet; total depth, 3,153 feet.

Monument Area

Anderson-Prichard Oil Corp. No. 2 Britt "A," C NE SW sec. 6-20-37. T.D. 3,417 ft.; will drill by drill pipe.

Gulf Oil Corp. No. 1 Ketter, C SW SE sec. 20-19-37. T.D. 4,007 ft.; acidized; flowed 176 bbls. in 24 hours.

Texas Co. No. 3 State-Aggies, NE cor. sec. 20-20-37. T.D. 3,498 ft.; drlg. at 3,215 ft.

Shell Pet. Corp. No. 1-B Cooper, NE NE NW sec. 4-20-37. Drlg. 3,782 ft.

Amerada Pet. Corp. No. 2-L State, sec. 20-19-37. Drlg. 3,705 ft.

Amerada Pet. Corp. No. 2-R State, sec. 29-19-37. Drlg. 3,605 ft.

Tide Water Oil Co. No. 1 Anderson, C NW SE sec. 8-20-37. Testing at 3,877 ft.

Tide Water Oil Co. No. 1 Laughlin, C SE NW sec. 4-20-37. T.D. 3,880 ft.; testing.

Amerada Pet. Corp. No. 1 Haney, C SW SW sec. 33-19-37. T.D. 3,910 ft.; acidized; flowed 4 bbls. per hour for 12 hours.

Texas Co. No. 4 Phillips, C SE NW sec. 6-20-37. T.D. 3,900 ft.; flowed 450 bbls. in 5 hrs.; csg. weakened; P.B. to 3,883 ft. to shut off water.

Continental Oil Co. No. 2-A-17 State, C SE SW sec. 17-19-37. T.D. 4,005 ft.; flowed 15 bbls. in 3 hrs.; to acidize.

Skelly Oil Co. No. 2 State "E," C NE NE sec. 29-19-37. Drlg. 3,773 ft.

Gulf Oil Corp. No. 1 Culp "B," NW NW SE sec. 31-19-37. T.D. 3,895 ft.; testing.

Gulf Oil Corp. No. 2 Culp "B," C NE SE sec. 31-19-37. T.D. 1,164 ft.; set 7⅝-in. csg.

Ohio Oil Co. No. 3 Barber, C SE SW sec. 32-19-37. Drlg. 3,740 ft.

Empire Oil & Ref. Co. No. 1 Laughlin, C NW SE sec. 5-20-37. Drlg. 3,750 ft.

Gulf Oil Corp. No. 7 Graham-State "C," C SW NE sec. 25-19-36. T.D. 3,975 ft.; acidized.

Ohio Oil Co. No. 1 State-McGrail, C SE SW sec. 26-19-36. T.D. 3,830 ft.; set 7-in. csg.

Shell Pet. Corp. No. 1 State "H," C NE SE sec. 20-19-37. Drlg. 3,525 ft

Humble Oil & Ref Co. No. 2 Laughlin, C NW SE sec. 4-20-37. Cellar and pits.

Amerada Pet. Corp. No. 3 Lambert, C NE NE sec. 6-20-37. Drlg. 2,900 ft.

Tide Water Oil Co. No. 1 State "I," SW SE SW sec. 16-20-37. Drlg. 1,180 ft.

Continental Oil Co. No. 4-A-3 Reed, C SE SE sec. 3-20-37. Drlg. 2,503 ft.

Gulf Oil Corp. No. 8 Graham-State, C NW SE sec. 25-19-36. Derrick.

Amerada Pet. Corp. No. 3 Andrews, C SE NE sec. 11-20-36. R.U.R.

Amerada Pet. Corp. No. 4 Andrews, sec. 12-20-36. Derrick.

Amerada Pet. Corp. No. 1 P. H. Pewitt, sec. 8-20-37. Cellar and pits.

Empire Oil & Ref. Co. No. 1-F State, sec. 30-20-37. Location.

Gulf Prod. Co. No. 1 Whitmire, sec. 8-20-37. Location.

Gulf Oil Corp. No. 2 Kutter-State "B," C SW NW sec. 38-19-37. Cellar and pits.

Eunice Area

Gulf Oil Corp. No. 2 Graham-State "E," C NW SE sec. 6-21-36. T.D. 3,885 ft.; to test.

Gulf Oil Corp. No. 1 Orcutt "C," C SE SE sec. 6-21-36. Drlg. 3,455 ft.

Gulf Oil Corp. No. 3 Collins, C SW NE sec. 14-21-36. T.D. 3,700 ft.; set 5½-in. csg.

Landreth Prod. Co. No. 2-D State, sec. 22-21-36. T.D. 3,908 ft.; to test.

Mid-Continent Pet. Corp. No. 2 Marshall, C NW NW sec. 11-21-36. Cg. 3,767 ft.

Humble Oil & Ref. Co. No. 4 State-Aggies, C SE NW sec. 31-20-37. Drlg. 3,850 ft.

Sun Oil Co. No. 2 Adkins, C SE SW sec. 3-21-36. T.D. 3,817 ft.; set 7-in. csg.

Humble Oil & Ref. Co. No. 5 Knox, C SE SE sec. 10-21-36. T.D. 3,850 ft.; set 5½-in. csg.

Gulf Oil Corp. No. 11 Arnott-Ramsey "C," C NE SE sec. 21-21-36. Drlg. 3,796 ft.

Gulf Oil Corp. No. 1 Sunshine, C SW SW sec. 30-20-37. Drlg. 1,020 ft.

Skelly Oil Co. and Sun Oil Co. No. 1 Adkins, C SW SW sec. 3-21-36. Drlg. 1,800 ft.

Continental Oil Co. No. 2-D-11 State, C SW SW sec. 11-21-36. Drlg. 1,590 ft.

Continental Oil Co. No. 3-D-11 State, C SE SW sec. 11-21-36. Drlg. 2,680 ft.

Jim Murray et al No. 3 Wallace, C SE NW sec. 3-21-36. T.D. 2,589 ft.; set 7⅝-in. csg.

Gulf Oil Corp. No. 2 Orcutt "C," C NE NE sec. 6-21-36. Derrick.

Humble Oil & Ref. Co. No. 6 Knox, C NE SE sec. 10-21-36. Cellar and pits.

Gulf Oil Corp. No. 2 Harry Leonard, C NE SW sec. 22-21-36. T.D. 1,498 ft.; set 7⅝-in. csg.

Shell Pet. Corp. No. 1 State "K," C NE NE sec. 36-20-36. R.U.R.

Humble Oil & Ref. Co. No. 5 State-Aggies, C NE SW sec. 31-20-37. Drlg. 810 ft.

Continental Oil Co. No. 4-B-14 Lockhart, sec. 14-21-36. Location.

Continental Oil Co. No. 3-B-18 Meyer, sec. 18-21-36. Location.

Gulf Prod. Co. No. 1-D Bell-State, sec. 6-21-36. Derrick.

Gulf Prod. Co. No. 1-E Bell-State, sec. 11-21-36. Location.

Gulf Prod. Co. No. 4 Harry Leonard, sec. 22-21-36. Loc.

Sun Oil Co. No. 3 Akens, sec. 3-21-36. Derrick.

Repollo Oil Co. No. 1 Berryman, sec. 11-21-36. T.D. 3,882 ft.; acidized; swbd. 63 bbls. in 9 hrs.; testing.

Sims Area

Penrose and Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,305 ft.; waiting on tools.

Continental Oil Co. No. 1-A-15 Elliott, SE SE SE sec. 15-22-37. Drlg. 2,215 ft.

Continental Oil Co. No. 1-A-21 Elliott, C SE SE sec. 21-22-37. T.D. 3,559 ft.; flowed 12 bbls. in 12 hrs.

Samedan Oil Co. No. 1 Hughes, C NE SW sec. 4-23-37. T.D. 3,611 ft.; C.O.

Ohio Oil Co. No. 1 Walden, C NE NE sec. 21-22-37. T.D. 3,636 ft.; fsg.

Skelly Oil Co. No. 1 Ella Simms "A," C SW SE sec 3-22-37 T.D. 3,662 ft.; flowed 220 bbls. in 24 hrs.

W. H. Street et al No. 1 Wood, C W½ SE NE sec. 22-22-37. Drlg. 505 ft.

Amon G. Carter No. 1 E. M. Elliott, sec. 22-22-37. Location.

J. E. Farrell No. 1 E. W. Walden, sec. 15-22-37. Derrick.

Repollo Oil Co. No. 2 Ollie Boyd, sec. 23-22-37. Cellar and pits.

Skelly Oil Co. No. 1 G. W. Sims, sec. 10-23-37. Derrick.

Skelly Oil Co. No. 1 W. P. Sims, sec. 10-23-37. Derrick.

Hobbs Area

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 33-18-37; wildcat. Old well P.B. from 4,238 to 4,228 ft.; swbd. sulfur wtr.; no oil; S.D. for orders.

Cooper Area

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-36. T.D. 3,497 ft.; S.D.

Skelly Oil Co. No. 6 Coates, C NE SW sec. 3-24-36. T.D. 3,510 ft.; set 7-in. csg.

Lea County—Miscellaneous

Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. T.D. 3,780 ft.; flowed 20 bbls. per day of oil, 160 bbls. water.

Rowan et al No. 1 Mattern, C SW SE sec. 7-22-37. T.D. 3,789 ft.; acd.; flowed 5 bbls fluid per hr., 95 per cent water.

C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37. T.D. 4,075 ft.; acd.; swb. 20 bbls. fluid, 9½ hrs.

Gulf Oil Corp. No. 1 L. M. Buffington, C SW SW sec. 13-25-37. T.D. 3,903 ft.; P.B. 3,369 ft.

Skelly Oil Co. No. 1 Stuart, C NE NW sec. 15-25-37. T.D. 3,416 ft.; P.B. 2,230 ft.; shot.

Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 2,526 ft.; S.D.

Argo Royalty Co. No. 1 Lanehart, SW SE NE sec. 21-26-37. Drlg. 2,970 ft.

Magnolia Pet. Co. No. 1 Scharbauer-Edison, C NW NE sec. 29-16-35. Drlg. 4,876 ft.

Magnolia Pet. Co. No. 2 O. E. Carson, C NW NW sec. 33-21-37. Drlg. 3,520 ft.

Plains Prod. Co. and Culberson & Irwin No. 2 Knight, C NE SW sec. 14-24-37. Cellar and pits.

Republic Prod. Co. No. 2 Crosby, NW NW SW sec. 28-25-37. T.D. 3,310 ft.; 10,000,000 ft. gas; acidized.

Stanolind O. & G. Co. No. 1 Langley, sec. 15-25-37. Drlg. 2,952 ft.

Emperor Oil Co. No. 1 State, C SW SW sec. 5-21-36. T.D. 1,630 ft.; R.U.S.T.

Brown-Reynolds No. 1 Purcell, C NE NW sec. 8-21-38. T.D. 298 ft.; set 15½-in. csg.

Leonard No. 3 Lanehart, C NE NW sec. 21-25-37. Rig.

Talbot-Mullineaux No. 1 Quincy-Ricker, C SE SE sec. 7-16-36. Wildcat; S.D. 200 ft.

J. C. Clower No. 1 Turner, C SE SE sec. 29-21-37. Drlg. 1,185 ft.

Culberson-Irwin & Stovall No. 2 Stuart, NW SE SE sec. 10-25-37. Drlg. 1,180 ft.

Continental Oil Co. No. 1-A-30 Eaves, C NE NE sec. 30-26-37. Drlg. 1,250 ft.

Harding County

Kahay No. 1 Dae Daca, C sec. 19-20n-31e. T.D. 1,702 ft.; S.D.

Clyde B. Neill No. 1 Foster, C NW SW sec. 27-21-30. S.D. 700 ft.

Eddy County

Etz Bros. No. 3 State, sec. 16-17-30. Drlg. 2,600 ft.

Carper et al No. 1 Gizler "B," NW NE NW sec. 28-17-30. Pay 3,403-10 ft.; T.D. 3,415 ft.; flows 20 bbls. per hour by heads.

Hammond et al No. 1 State, SW SE SW sec 15-17-28. T.D. 960 ft.; S.D.

Pecos Valley Gas Co. No. 1 Andrews-State, C SW SW sec. 2-17-28. Set 6⅝-in. csg. 1,473 ft.

Repollo Oil Co. No. 1 McIntyre "C," sec. 21-17-30. T.D. 3,218 ft.; acidized; flowed 70 bbls. of oil per day through tubing.

Republic Prod. Co. No. 6 Russell, SW NE NW sec. 18-17-31. Drlg. 2,925 ft.

Flynn, Welch & Yates No. 74 State, C S½ NE SW sec. 27-18-28. Drlg. 2,640 ft.

D. & B. Oil Co. No. 2 Berry, NW SE NW sec. 21-17-30. S.O. 2,924-27 ft.
William Dooley No. 1 Hatchett, NE SW NE sec. 11-29-26. Wildcat; T.D. 640 ...; S.D., high water.

De Baca County

Mid-Continent Engineering Corp. No. 1 State, C NW SE sec. 27-4n-22e. T.D. 1,051 ft. in broken lime; S.D.

McKinley County

Claude Walker No. 2 fee, sec 20-20n-9w. Drlg. at 100 ft.

Roosevelt County

Wirt Franklin and Flynn, Welch & Yates No. 1 Catts, C NW NW sec. 28-3n-30e. T.D. 1,080 ft.; to straighten hole.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. gr. sh. 2,300 ft.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 20-9n-17e. S.D. 804 ft.; (cor.).

McKinley County

Al Gibbons No. 2 fee, NW SW NE sec. 28-20n-9w. Drlg. sh. 425 ft.
Foster & Clark No. 2 fee, NW NE NE sec. 29-20n-9w. Drlg. 400 ft.
S. Bouton, CEL NW NE sec. 4-14n-10w. S.D. 1,490 ft.
Wm. Forth No. 5 fee, NW NW NE sec. 28-20n-9w. Loc.; (first report).

San Juan County

The Continental Oil Co. No. 41, NE cor. section 35-30n-19w, Rattlesnake field, was plugged and abandoned at 997 feet after deepening from 808 feet where it was completed for 19 bbls. early last year.

Continental Oil Co. No. 57 Tribal, NW NE NE sec. 2-29n-19w. Drlg. 175 ft.; (first report).
Atchison & Galloway No. 1 Cassidy, C SE SE sec. 19-29n-11w. S.D. 778 ft.; S.O.&W. at 683-95 ft.
R. R. Burke No. 3 Govt., NW NW NE sec. 18-21n-13w. R.U. machine.
Angel Peak Oil Co. No. 7 Govt., Lot 2, sec. 11-28n-11w. Drlg. 160 ft.
Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,298 ft.

San Miguel County

Cabra Springs O. & G. Co. No. 1 Cabra Springs ranch, SW NE NE sec. 22-12n-22e. Drlg. 4,110 ft. in anhyd.
S. W. Pressey et al No. 1 Faulkner, NE NE NE sec. 25-17n-16e. Resuming at 5,082 ft.; (formerly Star-Kennedy No. 3 Adams).

Torrance County

48 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9n-8e. Resumed at 2,045 ft.

COLORADO

Adams County

Oklahoma Oil Co. No. 1 Baxter, C SW sec. 2-3s-66. S.D. 4,368 ft. for 4-in. D.P.
Glendrige Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64w. S.D. 4,262 ft. for 6¼-in.

Archuleta County

William E. Hughes Est. No. 11 Gramps, NE of No. 10. Drlg. unreported depth.
Carl D. Linstrom No. 1 Crowley, SE SE SE sec. 3-22n-2e. R.U.
Maryott Drlg. Co. No. 1 Hollywood, SE SE SE sec. 15-34n-1w. S.D. 625 ft.
Oil City Pet. Co. No. 1-A Garrett, NW NE NW sec. 25-33n-2e. S.D. after P.B. from 1,515 ft. to O.S. at 970 ft.

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705 ROSS AVENUE, DALLAS, TEXAS

Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW) sec. 24-33n-2e. S.D. 1,183 ft.
H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. Drlg. 1,167 ft.; will U.R. 6¼-in. for W.S.O.

Boulder County

Boulder Prod. Dev. Co. No. 2 Maxwell, NW NW NE sec. 24-1n-71. Drlg. sh. 1,890 ft.
Baker et al No. 1 fee, SW NE NE sec. 9-1n-70. Drlg. 1,250 ft.; (first report).

Huerfano County

S. W. Pressey No. 1 Ojo, SW NE sec. 10-29s-69. O.W.D.D.; drlg. 3,150 ft.; S.G.; object Dakota at 3,900 ft.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. Landed 8¼-in. at 2,700 ft.

LaPlata County

Detroit Oil Association No. 1, NW SW sec. 9-35n-12w. Drlg. below 3,125 ft.
McGarr Pet. Co. No. 1 Pinon Mesa Land Co., CSL NE NE sec. 34-33n-12w. Cmtd. 6¼-in. at 3,450 ft.; D.D. to 3,680 ft.; S.D.

Larimer County

Continental Oil Co. No. 8 Buckeye-U. P., C NE SW sec. 1-10s-68. Cg. 4,458 ft.; cd. Dakota sd. at 4,455-58 ft.; slight show oil and gas.

Lincoln County

A wildcat in eastern Colorado which has been drilling intermittently for the past two years is the Consolidated Smelting & Metals Corp. No. 1 Hancock, NE NE SW section 7-17s-52e, in the Haswell district in eastern Lincoln County, 120 miles southeast of Denver. At present it is shut down at 2,096 feet with a hole full of water and with the bailer in the hole. The elevation is 4,761 feet. The driller's log shows that it had the top of the Dakota at 1,628 feet, that horizon carrying water. At 1,904 feet, in the Morrison, with 960 feet of water in the hole it showed sufficient gas to force the bailer 75 feet up in the hole. It had a show of black oil in the third bench of the Morrison at 2,076-84 feet.

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE SW sec. 7-17s-62. S.D. 2,096 ft.

Moffat County

A new oil pool in the Sundance formation in Moffat County appears probable in the Continental Oil Co. No. 1 Henderson, SW cor. section 16-3n-91, on the Thornburg, or Morapas dome. This was an old well drilled by the Marland Oil Co. in 1926 to 2,505 feet. It stopped in the top of the Sundance formation and was plugged back to 2,373 feet and completed in the Dakota for 30,000,000 feet of gas with a pressure of 728 pounds. The Continental company, which took over the Marland properties, started deepening the hole to the Pennsylvanian, expected at 4,500 feet. It topped the Sundance sand at 2,525 feet and at 2,555 feet to bottom at 2,575 feet it recovered saturated cores. The Marland well stopped 70 feet off of the saturated sand. The well will be tested at present depth. Forty feet of 7-inch and 2,501 feet of 5¼-inch were set preliminary to making a swabbing test. It did not flow.

The Thornburg dome is about 25 miles south of Craig and on the boundary between Moffat and Rio Blanco Counties, southeast of the Iles field and south of the Moffat field. The dome, delineated by dips in the Mancos shale at the surface, has a structural closure of 900 feet as mapped by Ross Heaton, and apparently is not faulted. Two other wel's were drilled near the top by the Marland company. Its No. 1 Wymore, SW SW NW section 16-3n-91, had 20,000,000 feet of gas in the Dakota at 2,124-27 feet, and the No. 1 Clark, NE SW NW section 21-3n-91, found the Sundance dry at 3,110 feet and was completed for 20,000,000 feet of gas in the Dakota. A well drilled in the SE section 8, found water in the Dakota. It was 300 feet down structure. The dome is separated from the Iles field by a large fault.

Rumors have been current in Denver for the past three weeks that the Mountain Fuel Supply Co. had made an oil discovery in its No. 1 Allen, NE SW SE section 32-12n-97, on the Powder Wash structure, east of the Hiawatha gas field, but these lack official confirmation. One report said the well looked as if it was good for around 2,000 bbls. a day and another that it showed for 40 to 50 bbls. an hour on a drill stem test. Only information from official sources regarding the showing, however, was to the effect that oil saturation was cored at 3,059-67 feet, followed by water at 3,067-79 feet. Last report was that it was coring at 3,903 feet. The only other well drilled on this structure was the gas discovery in No. 1 Musser, half a mile to the south, which was completed in 1931 for 35,000,000 feet of gas at 2,152 feet.

The Mountain Fuel Supply Co. No. 1 Kuykendall, NE NE SE section 22-12n-100, Hiawatha gas field, which was completed in 1928 for 37,000,000 feet of gas at 2,025 feet, was deepened about 400 feet in 1935 and pumped 140 bbls. of 38 gravity oil first 24 hours. Last May deepening again was resumed. Unconfirmed reports say that it cut an oil sand at 2,477-2,525 feet which flowed by heads at intervals of 1½ hours, the oil being around 50 gravity. Oil was reported cased off to land pipe on top of the gas sand expected at around 2,620 feet. Last depth reported was drilling at 2,606 feet.

Continental Oil Co. No. 1 Henderson, SW SW SW sec. 16-3n-91. Drlg. blk. sh. 2,524 ft.
Mountain Fuel Supply Co. No. 1 Allen, NE SW SE sec. 32-12n-97w. Cg. 3,903 ft.
Mountain Fuel Supply Co. No. 1 Kuykendall, NE NE SE sec. 22-12n-100. Drlg. 2,606 ft.
Morapas Pet. Co. No. 1 Cole, C SW SE sec. 1-3n-92. Rig up; bldg. winter camp.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. Drlg. 1,699 ft. in wet hole.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. S.D. 3,960 ft.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. Drlg. 1,050 ft.
South Park Oil Co. No. 1 LeBert, NE NE NW sec. 21-11s-75w. S.D. 705 ft.
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. Drlg. 5,010 ft.; carrying 4¾-in. at 4,950 ft.

Routt County

Mid-Colo Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. S.D. 2,910 ft.; renewing leases before drlg. into Sundance.

Washington County

I.T.I.O.-Carter-Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49. Drlg. 5,800 ft.; getting near the granite.

Weld County

Continental Oil Co. No. 2 Briggs, C NE SW sec. 13-6n-61. Drlg. 5,662 ft. in sh. and shells.

Yuma County

Eastern Colorado had a disappointment this week in the Indian Territory Illuminating Oil Co. No. 1 Strangways, on the Beecher Island block, near the Kansas line in the C NW SW section 21-2s-43. It hit the granite at 5,575 feet and drilled 20 feet into that formation before stopping. The pipe was shot off and it is trying to pull the string to plug and abandon. The company will not release the log of the well until after its No. 1 Vorce, in Washington County, is completed. In the meantime there is very little information available upon which to form an opinion of the probable results of the failure on the eastern Colorado play where more than 3,800,000 acres are under lease over an area 100 miles wide by 150 miles long. The deepest objective of the Beecher Island test was the Arbuckle lime expected at 6,500 feet. Unofficial information is to the effect that the drill went out of the Cherokee direct into the granite. Whether the granite ridge running through the area forms a demarcation between the Rocky Mountain formations and depositions in the Kansas and Mid-Continent areas will become more apparent when the Vorce well to the west is completed and logs of both become available.

WYOMING

Albany County

California Co. No. 4 Holst, SE sec. 13-17n-77. Drlg. 1,172 ft.
Geo. D. Parkinson et al No. 1 George & Hunt, NW NE SE sec. 5-17-75w. Drlg. 4,575 ft.; Dakota at 4,328-90 ft. dry; will go to Sundance.
Ohio Oil Co. No. 1 Stiles, SW cor. sec. 12-15n-75w. P.B. from 3,003 ft. to test O.S. at 2,900 ft.
Hal Blakeman No. 1 Chapple, C NE NW sec. 31-21-76. Drlg. 1,510 ft.

Big Horn County

The Stock Oil Co. No. 1-X Allen, SW cor. Lot 2, section 18-56-97, Garland field, made 500 bbls. per day initial production at a total depth of 4,101 feet and then stopped flowing. It topped the Madison at 3,885 feet. This well is 420 feet east of the same company's No. 1 Allen, which has been out of control since last January, and was drilled as a relief well. When it was found that water forced into the No. 1 Allen failed to kill the gas, it was decided to drill it on down to the Madison. It will stand until No. 1 Allen is completed and then it will be swabbed to free the formations of water forced into them while trying to kill the other well. This water has been giving trouble in producing the oil from the Madison. The operation has heretofore been carried under Montana-Wyoming Oil Co.

Stock Oil Co. No. 1 Allen, Lot 52, sec. 32-56n-97. T.D. 3,-

525 ft.; trying to drill by plugged D.P.; (formerly Montana-Wyoming Oil Co.).
Ohio Oil Co. No. 2 Smith, CWL NE SE sec. 32-56-97. Drlg. in red beds 3,250 ft.
Ohio Oil Co. No. 1 Irene Lindsay, C NW SE sec. 23-56n-97. Drlg. in red beds 4,534 ft.
Ohio Oil Co. No. 2 State, NE cor. Lot 38, sec. 36-46n-97. R.U.
Peay Oil Co. No. 1 Denio Hr., 43-C, sec. 15-55n-87w. T.D. 3,845 ft.; prep. to run 6⅝-in.
Stock Oil Co. No. 1 Griffin, Lot 60, sec. 4-55n-97. Drlg. 1,165 ft.; 9⅝-in. cmtd. 1,048 ft.
Peter Evanoff et al No. 1 McAllister, NW NE SE sec. 9-55n-87. T.D. 2,895 ft.; fsg. bit; 6¼-in. at 2,640 ft.

Carbon County

Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78. Drlg. 1,560 ft.
General Pet. Corp. No. 1 Union Pacific, SW NW sec. 19-83w. T.D. 4,420 ft.; fsg.
Ohio Oil Co. No. 11 Harrison & Cooper, NE SW SW sec. 35-20n-78. Drlg. sh. and shells 1,625 ft.
Ohio Oil Co. No. 2 Dixon, SE NE NE sec. 34-20n-78w. R.U. to deepen old well from 8,094 ft. to Sundance.
Sinclair-Wyoming Oil Co. No. 10 Govt., SW SE NW sec. 7-26-89w. T.D. 4,228 ft.; P.B. to 4,063 ft.; tested 5,000,000 ft. gas in Sundance topped at 4,051 ft.; will kill and D.D. to Tensleep.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW SW sec. 16-32n-69w. S.D. 3,050 ft.; may install rotary.

Campbell County

G. J. Sherin et al No. 1 Rhodes, NE SE SW sec. 24-49n-74. S.D. 191 ft.

Fremont County

C. E. Nelson No. 2 Enos, SW NE SW sec. 27-3n-1w. Drlg. 121 ft.
Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. Drlg. 2,853 ft. in Frontier; carrying 4¾-in.
Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Drlg. 6,400 ft.; will go to Tensleep.

Goshen County

Goshen County, in southeastern Wyoming and bounding Nebraska on the west, is scheduled for a wildcat play at an early date. Two tests, one by the Adams-Louisiana Co. and the other by the Ohio Oil Co. are expected to get under way within 60 days. The Adams-Louisiana Co., of Houston, will drill the Hiram D. Lingle block of oil leases in the Pine Ridge area north of the town of Lingle. The center of the block is about 6 miles northwest of Lingle. The area was first called to the attention of the U. S. Geological Survey by Mr. Lingle last March and after investigation was designated by the department as a probable oil-bearing structure, which defined its boundaries and designated it as the Pine Ridge Unit area. Geologists of the Adams-Louisiana Co., accompanied by Mr. Lingle's geologist, Dr. Harold J. Cook, of Agate, Neb., then made a thorough surface investigation, following which the company took an option on the block and began an extensive seismograph survey which has recently been completed.

These investigations indicated the probability of a closed structure and the surface geology of the area and the surrounding territory to the south into Goshen Hole and east to the state line and into Nebraska indicate an extensive drainage area. A long trend coming off of the Hartville uplift in a southeasterly direction terminates in a rocky prominence known as Pine Ridge. Cutting through this trend at the north side of Pine Ridge is a massive fault which has been named the Fort Laramie fault. It parallels in its general trend the Hartville uplift.

It is believed that somewhere along this fault oil will be found in large quantities. The Ohio Oil Co., following extensive seismograph surveys, has leased three other areas along this fault to the north and is now preparing to drill on one of these about 3 miles to the south of the town of Jay Elm. Two water wells have been completed on the Joe Wagner land and the rotary now completing the company's No. 1 Stiles, in Albany County, will be moved to this location. The Ohio location is about 7 miles north of the Pine Ridge unit. The last named, comprising 35,000 acres, is principally in Township 26n, Range 62w.

Hot Springs County

Mountain States Power Co. No. 1 Mexico-Wyo., SW SW NW sec. 11-46n-99. O.W.D.D.; old T.D. 2,901 ft.; P.B. to 2,800 ft.; redrld. to 2,860 ft; making some gas with wtr.; will P.B. again.
Empire State Oil Co. No. 1 Larson, sec. 33-44n-93. Drlg. 1,521 ft.
Fruedenthal No. 6, SE SE NE sec. 21-43-92. T.D. 405 ft.; tstd. 4 B.P.D.; will D.D.

Laramie County

Amerada Pet. Corp. No. 1 Morton, C SW SW sec. 13-13n-68. Drlg. 4,150 ft. in Hygiene.

Lincoln County

Peace Oil Co. No. 36, SE sec. 9-26n-113. R.U. machine.
Senrab Oil Corp. No. 3 Govt., CSL SE NW sec. 10-26n-113w. S.D. 1,020 ft.

Niobrara County

One completion, three wells near completion and two new locations marked an active week in the Lance Creek field. The Continental Oil Co.'s No. 4-A Schuricht, C NE SE section 6-35-65, an inside location in the southwestern part of the field, was given an open flow test through the casing and made 5,233 bbls. in 24 hours with 3,430,000 feet of gas. It was then pinched to 160 bbls. daily. This was the only Sundance well in the field given a full 24-hour test with the exception of the Continental's Joss well, which made between 7,000 and 8,000 bbls. No. 4-B Schuricht was completed at 3,957 feet. It had gas sand at 3,899-3,903 feet and oil sand at 3,903-3,947 feet. Top of red beds 3,950 feet. Elevation 4,381 feet.

Argo Oil Co. No. 5 Elliott, C NW NW sec. 5-35n-65. Drk.; W.O. tools.
Continental Oil Co. No. 1 Rohiff, 200 ft. N of S line and 660 ft. W of E line, SE NW sec. 32-26n-65. Cg. 3,936 ft.; (near completion).
Continental Oil Co. No. 2-B Schuricht, SE SW SE sec. 6-35n-65. Loc.; (first report).
Continental Oil Co. No. 2-A Dielman, NW NE NE sec. 7-35n-65. Loc.; (first report).
Continental Oil Co. No. 7 Rohiff, C NE SW sec. 23-36-65. T.D. 3,950 ft.; fsg. sd. line and swab; not tested.
Adams Louisiana Co.-Bay-Elwell No. 1 Spaugh, C NW NE sec. 18-35n-65. Cmtd. 12½-in. at 230 ft.; R.U.R.
Holly Dev. Co. No. 1 Novick, NE SE SW sec. 6-35n-65. Drlg. 1,400 ft.
Lewis Gokel No. 1, NE SE NW sec. 31-35n-62w. Drlg. 900 ft.
J. M. Huber Corp. No. 2 Joss, NE NE SW sec. 6-35n-65. Bldg. rig.
Ohio Oil Co. No. 1 Elizabeth Lamb, C NE NE sec. 5-35n-65. T.D. 4,010 ft.; rng. pipe; (near completion).
Ohio Oil Co. No. 3 Richards & Comstock, 200 ft. S and N and 660 ft. W of E, NE SW sec. 32-36n-65w. Cg. 3,826 ft.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. S.D. below 4,600 ft.; believed to have cored top of Tensleep.
Riggs Oil Co. No. 2 Spaugh, C NW NE sec. 5-35n-65. T.D. 350 ft.; fsg.
Chester Oil Co. No. 1 fee, NE NE NE sec. 14-39n-61. Drlg. 926 ft.; 45 B.P.D. in Dakota at 778-808 ft.

Park County

General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. Drk. up; M.I. equip.; contr. to Manning & Martin, Inc.
Resolute Oil Co. No. 1 State, C NW SW sec. 16-57-101w. Drlg. 7,100 ft.

Platte County

A test well on the Antelope structure in Platte County is getting under way in the Dividend Oil & Refiners, Inc., No. 1, CSL NW SW section 17-24n-66, 8 miles east of Wheatland. F. B. Renfrow, of Canon City, Colo., is president of the company. The drilling company is affiliated with the United Dividend Corp., marketer of Speedway gas and oils in Colorado. The company is an independent concern which supplies about 40 retail outlets in the state and marketed close to 3,000,000 gallons of gasoline last year. The drilling company has 12,000 acres in Wyoming, 40,000 acres in southeastern Colorado and 160 acres in the Burrton field in Kansas.

Dividend Oil & Ref., Inc., No. 1, CSL NW SW sec. 17-24n-66. Rng. 12½-in. at 511 ft.; (first report).

Sublet County

Progressive Oil Co. No. 1 Haddenham, SE NW NW sec. 21-28n-113w. Drlg. 400 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55-85. T.D. 3,185 ft.; U.R. 4¾-in. to carry; H.F.W. at 3,090-3,100 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Cooper, C NW SE sec. 15-16n-104. Loc.; South Baxter Basin; (first report).

Uinta County

Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118. Drlg. 1,800 ft.
W. D. Marshall No. 1 Govt., NW SW SE sec. 12-15n-118. Drlg. 1,388 ft.

Washakie County

Wyoming O. & R. Co. No. 4 Govt., NW NW NW sec. 31-48-90. Drlg. 111 ft.
Nystrom & Smoot No. 3 State, NE NE NE sec. 36-48-91. Spdg.
Yale Oil Corp. No. 1 Govt., SE SE SE sec. 25-48-91. Spdg. 97 ft.
Ariton & Doyle No. 1 Govt., SW SW SE sec. 29-48-91. Drlg. 1,085 ft.; cmtd. 8¼-in. at 1,046 ft.
Bruce Teeters No. 3 Govt., CWL SW SW sec. 30-48-90. Drlg. 1,522 ft.
Wyoming O. & R. Co. No. 1 State, NE SE NE sec. 36-48-91. Drlg. 1,485 ft.; carrying 8¼-in. at 1,456 ft.

Weston County

John Brophy No. 1 Lemke, SE SE NE sec. 10-48n-65w. Drlg. 500 ft.
Conway Oil Corp. No. 1 Govt., C SE NW sec. 7-41n-60w. Cmtd. cave at 2,666 ft.; W.O.C.

MONTANA

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. S.D. 3,540 ft.
E. A. Lammers & Son No. 1 Berhold, SE SE sec. 6-1s-32e. Drlg. 236 ft.

Cascade County

C. Leonard Smith No. 1 Smith-Schwingle, NE NE SW sec. 14-22n-2e. Cmtd. 8¼-in. at 210 ft.

Carbon County

East Bridger O. & G. Co. No. 1, CSL SE SE sec. 23-6s-23e. Resumed; drlg. 640 ft. in Colo. sh.
Ohio Oil Co No. 1 Northern Pacific, SE NE SW sec. 11-7s-21. T.D. 5,554 ft.; cmtd. 4¾-in. at 5,440 ft.; W.O.C.; M.O. rot.; is probably stdg.
Henderson Producing Co. No. 1-H-11 Elk, 11, SE SE NW sec. 35-9s-23e. Drlg. 214 ft.; base Eagle 90 ft.
Round Butte O. & G. Co. No. 2, CWL NE SE sec. 3-8s-23e. Drlg. 310 ft.

Fallon County

The Montana-Dakota Utilities Co. No. 1 Unit, NE NE NW section 17-4n-62, Baker-Glendive anticline, which attracted considerable attention last May when it gave a spectacular performance at 6,797 feet by flowing oil with water giving the appearance of being a gusher, is again at a critical stage. At that time the best performance of the well indicated a production of around 225 bbls. of oil a day after cleaning up. The water gave considerable trouble and it was decided to kill the well and drill deeper. Following the wide publicity given the well, the company discontinued giving out reports. The best information at this time is that the total depth is 8,186 feet, probably in the Devonian. The 5$\frac{3}{16}$-inch was cemented at 8,120 feet and the well was swabbed down and then was reported making 3 to 10 bbls. of clean oil per hour through the tubing. It will be acidized.

Montana-Dakota Utilities Co. No. 1 Unit, NE NE NW sec. 17-4n-62. T.D. 6,186 ft.; tstg.
Montana-Dakota Utilities Co. No. 2 Unit 8, C NE SW sec. 8-4n-62. R.U.; W.O. tools.

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. S.D. 1,100 ft.; tools still in hole.
Judith Operating Co. No. 2 Govt., NW NE sec. 5-22n-17e. Drlg. 2,775 ft. in Colo.; wtr. in sd. at 2,580-2,610 ft.
Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-2s-18e. Drlg. 576 ft.
Emmons et al No. 3, SE NE NE sec. 6-21n-18e. Gas at 432-586 ft. in 15-in. hole; will bradenhead and D.D. in 12-in. hole.

Glacier County

Only one well was completed in the Cut Bank field. This was B. V. Hole No. 1 Allotted-124, NE NE NE section 1-32n-6w, on one of the Indian tracts at the south end of the field. It swabbed 65 bbls. per day at a total depth of 3,060 feet. The 8¼-inch was cemented at 2,965 feet and 90 feet of 7-inch liner was landed at 3,010 feet. The top of the Cut Bank was at 3,010 feet and the Ellis at 3,051 feet. Elevation 3,712 feet.

Preliminary construction work on the Northwestern Refining Co. new refinery a mile west of the town of Cut Bank is getting under way. The company has increased its capital from 60 shares to 10,000,000 shares of $1 par value. Officers and directors are L. B. O'Neil, president; Virgil B. Nelles, secretary; James Mullen, George McCabe, Reese Poynter, James F. Cox and L. P. Donovan.

Cut Bank operators are rushing to get new wells under way before cold weather in order to comply with the drilling requirements on Indian leases sold at auction last fall. Four new operations were reported this week.

A. B. Cobb No. 2 All.-115, SE NE SE sec. 31-33n-5w. Bldg. road; (first report).
A. B. Cobb No. 2 Jackson-Reagan, NE NE NW sec. 5-32n-5w. Drlg. 2,475 ft.
Drumheller Reservation Synd. No. 1 Tarrant, C SW SW sec. 21-34n-6w. Digging cellar.
Montana Power Gas Co. No. 2 Gaines, CSL SW NW sec. 6-33n-5w. Drlg. 995 ft.; Colo. 435 ft.; 10¾-in. 500 ft.
Montana Power Gas Co. No. 1 Hattie Miller, C NW sec. 1-35n-5w. Drlg. 1,925 ft.
H. R. Patterson No. 1 Chatterton, SE SE NE sec. 22-32n-6w. T.D. 3,145 ft.; rng. 8¼-in.
Nadeau Bros. No. 2 Ewald, C SE NW sec. 9-32n-5w. R.O.G.; (first report).
Santa Rita O. & G. Co. No. 1 Shubat, C NW sec. 33-34n-5w. Drlg. 1,600 ft.; 10¾-in. cmtd. 266 ft.
R. C. Tarrant No. 3 State, NE SE NE sec. 36-34n-6w. Drlg. 850 ft.; Colo. at 510 ft.
R. C. Tarrant No. 7 Getty, SW NW SW sec. 2-34n-6w. R.U.; (first report).
R. C. Tarrant No. 3 Reichoff, C NE NE sec. 36-32-6w. Drlg. 415 ft.
R. C. Tarrant No. 8 Haglund, Jr., CEL NE NW sec. 13-34n-6w. Drlg. 1,695 ft.; 10¾-in. cmtd. 479 ft.
Texas Co. No. 3 Tribal-122, CSL SW SW sec. 6-32n-5w. T.D. 2,911 ft.; rng. 7-in.
Vern Johnson No. 1 Tribal-118, C SW SW sec. 1-32n-6w. T.D. 2,900 ft.; fsg. bailer.
Texas Co. No. 2 Tribal-121, C NE SE sec. 36-33n-6w. Stdg.; sump dug.
Texas Co. No. 4 Tribal-122, C SE SE sec. 6-32n-5w. Cmtd. 10-in. at 317 ft.
Texas Co., sec. 9 Unit 1, C SE SW sec. 9-32n-5w. Loc.; (first report).

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. S.D. 1,300 ft.; prep. to run 6¼-in. for W.S.O.

Liberty County

Western Natural Gas Co. No. 1 State, SE SE NW sec. 16-37n-4e. Drlg. Colo. sh. 1,300 ft.

Musselshell County

Geo. Gregory et al No. 24-A Govt., NW SW NW sec. 25-11n-24e (Devil's Basin). Drlg. 140 ft.

Petroleum County

Homestake Oil Co. No. 24-A Govt., C NW sec. 10-15n-29e. Drlg. 1,550 ft.; second Cat Creek dry.
H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 215 ft.

Phillips County

Montana-Dakota Utilities Co. No. 1 Garrison, SW SE SE sec. 6-31n-34e (Bowdoin gas field). Drlg. 660 ft.; cmtd. 8¼-in. at 190 ft.

Pondera County

Clinch Pet., Ltd., No. 1 Holan, NW SW NW sec. 12-23e-6w. S.D. 2,200 ft.
Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. S.D. 2,345 ft.
Jones-Chambers No. 1 Ericson, SW SE SW sec. 3-27-4w. Bldg. drk.
Montana Power Gas Co. No. 1 Berger, C NE sec. 31-31n-4e. R.U.

Sheridan County

Cheyenne O. & G. Co. No. 1 Olson, SE SE SE sec. 14-35n-53e. Drlg. 1,476 ft.

Toole County

There is a spurt in drilling activity on the west side of the Kevin-Sunburst field with the release of locations for six new operations mostly in that area this week. The increase is due to the completion in recent weeks of some good wells in that district. Five completions were reported.

A. Beardslee's No. 4 Swears, CSL SW NW section 9-35n-2w, is estimated at 100 bbls. per day from the Ellis-Madison at 1,673 feet after acidizing.

The Mahill Oil Co. No. 1 Van Note, NW NW SW section 30-35n-2w, is pumping 35 bbls. daily from the Ellis-Madison at 1,527-31 feet after acidizing with 500 gallons.

Coolidge & Coolidge's No. 3 Shaw, SE SE NE section 35-36n-2w, will make a small well in the Sunburst at 1,505-33 feet. Oil rose 300 feet.

The Big West Oil Co. No. 3 Dalquist, SE NE NW section 21-35n-3w, which last week was reported flowing 300 bbls. a day from the Ellis-Madison at 1,790-95 feet, went dead. After acidizing it began flowing again by heads and is estimated at 100 to 125 bbls.

The Deloraine Oil Co. No. 4 Government, NW SW NE section 28-33n-1w, is pumping 5 bbls. daily from a stray sand at 1,345-80 feet.

Agen & Krause Co. No. 1 Krause, SE SE SE sec. 9-35n-3w. Loc.; (first report).
Agen & Goeddertz No. 3 State, NE SW NE sec. 16-35n-3w. Spdg.; (first report).
Dr. B. A. S. Aronow No. 3 Govt., NE SE NW sec. 21-35n-3w. R.U.; (first report).
Alexander-Sorrell No. 1 Strange, NE SE SE sec. 31-35n-3w. T.D. 1,535 ft.; drlg. by tools.
Par Oil Co. No. 1 Reynolds, SW NE SW sec. 31-33n-4w. Drlg. 1,700 ft.
Clara Oil Co. No. 9 Waite, SE SE NE sec. 24-35n-2w. Drlg. 1,480 ft.
Geo. C. Hoyt No. 4 Govt., NW SW NE sec. 28-35n-1w. C.O. 1,385 ft. after shot; (first report).
Coolidge & Coolidge No. 1 Denzer, CEL SW NW sec. 11-35n-3w. Drlg. 975 ft.; (first report).
Nepstad & Van der Pas No. 2 Thompson, C SE SW sec. 2-35n-3w. Drlg. 995 ft.; (first report).
Frazier & Smith No. 1 Van Note, CWL SW NW sec. 30-35n-2w. Drlg. 600 ft.
Munger No. 1 Peterson, NW NW SW sec. 8-35n-2w. S.D. 1,450 ft. for repairs; Sunburst 1,390-1,430 ft.
No Jack Oil Co. No. 1 Lashbaugh, NE SW NW sec. 34-35n-2w. Spdg. 60 ft.
Superior Oil Co. No. 4 Halter, CEL NW NE sec. 21-35n-2w. Drlg. 1,075 ft.
C. Leonard Smith No. 1 Graves-Hines, SW SE sec. 20-33n-2e. Cmtg. 6¼-in. at 785 ft. before drlg. into gas sd.

NEBRASKA

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-32n-50w. Drlg. 1,352 ft.

Red Willow County

C. W. Kelly et al No. 1 Bower, SE NW SE sec. 2-2n-29w. S.D. 1,450 ft.

Sioux County

J. M. Huber Corp. and United Producers, Inc., et al No. 1 Morgan, C SW SW sec. 32-35n-56w. Drlg. 1,226 ft.

Franklin County

Wm. Steinlee No. 1, SE NE SE sec. 25-1n-15w. Loc.

Grant County

Byrd-Frost, Inc., and Magnolia Pet. Co. No. 1, NE NE NW sec. 11-24n-38w. T.D. 1,600 ft. in Tertiary; U.R. stuck D.P. at 1,225 ft.

UTAH

Daggett County

Mountain Fuel Supply Co. No. 1 State, NW SE SW sec. 16-3n-24e. T.D. 5,496 ft.; tested at 5,478-96 ft. showed little gas.

Emery County

California Co. No. 1 Palm Unit, C SW SW sec. 22-23s-11e. Drlg. 2,246 ft.

Grand County

Columbia Crude Corp. No. 1 Rath, NW SW sec. 12-25s-20e. Drlg. 1,441 ft.
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. Resuming at 4,880 ft.; to go 1,500 ft. deeper following seismograph survey.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 16-8s-5e. T.D. 3,990 ft.; fsg. bit.

Kansas Fields

(Continued from Page 65)

total depth. Empire Oil & Refining Co. No. 1 Doughty, NE cor. section 7-27-6, topped Wilcox sand at 3,169 feet; had Siliceous lime at 3,178-89 feet, total depth, and was dry and abandoned.

Three new Butler County tests were started, as follows: National Refining Co. No. 14 South Lathrop, C N half N half SW section 17-23-4, drilling below 40 feet; Simpson Oil Co. No. 1 Dahlem, SW cor. section 11-26-6, wildcat, rigging up; Hutchinson Oil & Gas Co. and others No. 1-A Westfall, SE SW SE section 13-27-3, wildcat, rigging up machine.

Greenwood County

Ohio Oil Co. No. 8 Pixley, NW SW NW section 8-22-10, was the only Greenwood County completion. It topped Mississippi lime at 2,381 feet; first oil 2,386 feet; pay 2,392-98 feet; total depth 2,400 feet. It pumped 12 bbls. of oil in 24 hours; was acidized, and pumped 28 bbls. of oil and 5 bbls. of water.

Marion County

One new wildcat test was reported in Marion County. Western Kansas Oil & Refining Co. and others were moving in material for No. 1 Hauser, SW cor. section 19-19-4.

Woodson County

Chris L. Sheedy and associates were moving in machine at No. 1 Brown, C S half S half SE section 22-26-14, the only new operation reported in Woodson County.

Coffey County

One new Coffey County test was reported. Reynolds and others were moving in machine for No. 1 Scott, SW SW NW section 13-23-14.

Cowley County

Home Natural Co. and McNish No. 2 Werner, SE SE SW section 31-32-6, new Cowley County wildcat, was rigging up. Lloyd, Frost & Study No. 3 McKinley, NW SW NE section 33-31-3, was rigging up rotary.

Sumner County

Lario Oil & Gas Co. and Barnsdall Oil Co. No. 9-A Wenrich, C W half NE NW section 23-32-2, an old well in the Oxford area, Sumner County, was dry and abandoned after deepening from 2,886 feet to 3,211 feet. Dorrance and others No. 1 Caldwell, NE SE NE section 22-32-2, was a cellar.

Southwestern Kansas

Helmerich & Payne and others No. 1 Jones, C SE section 34-26-34w, wildcat in Finney County, produced 3,250,000 feet of gas and was completed at 2,764 feet, total depth. United Production Co. No. 1 Christopher, C SE section 11-33-39w, Stevens County, produced 11,000,000 feet of gas and was completed at 2,780 feet, total depth. Helmerich & Payne and others were building rotary rig for No. 2 Jones, CSL SE section 25-26-35w, in Kearny County.

Oklahoma Fields

(Continued from Page 68)

tion 3-4s-3w, top of pay 789 feet; total depth 1,077 feet; shot; pumped 5 bbls. Shell Petroleum Corp. No. 44 McClure, NW NE SE SW section 5-4s-3w, dry and abandoned 1,212 feet, total depth. Pure Oil Co. No. 22 Westheimer & Daube, NE cor. section 9-4s-3w, sand 926 feet; total depth 1,114 feet; shot; pumped 14 bbls. Westheimer & Daube No. 6 Dillard, NW SE SW section 22-4s-2w, an old well, deepened from 1,832 feet to 2,001 feet; pumped 25 bbls., recompleted.

New work in Carter County: Skelly Oil Co. No. 1 Walker, NE NW SW section 9-2s-2w, pits; Pure Oil Co. No. 7 Westheimer & Daube, NW cor. section 10-4s-3w, old well deepening, fishing for core barrel at 1,085 feet.

Southwestern Oklahoma

A. H. Jackson No. 1-A fee, SW cor. section 27-1s-24w, wildcat in Jackson County, topped Cisco lime at 2,980 feet, and was dry and abandoned at 3,001 feet, total depth, in lime. Gulf Oil Corp. was digging pits at No. 6 S. J. Ellis, NE NE SE section 6-1s-19w, Jackson County.

Raizen Brothers No. 4 Price, SW SE SW section 10-3s-5w, was the only Stephens County completion. It had sand at 1,433-59 feet, total depth, and pumped 25 bbls. in 24 hours. Three new Stephens County tests were reported, as follows: Coline Oil Co. No. 1 Johnson, SW SE NE section 1-2n-8w, wildcat, moving in material; Hartman & Hamilton No. 2 Robinson, NW cor. section 15-3s-5w, rigging up rotary; Texas Co. No. 3 Tomlin, NE NW NE NW section 15-3s-5w, location.

In Comanche County, Theimer and others No. 1-A Jacobs, C W half SE SW section 30-2n-10w, was abandoned at 330 feet, total depth.

Twin State Oil Co. No. 1 Brown & Major, SW SE NW section 21-5s-6w, was location for a new wildcat in Jefferson County.

The following new work was reported in Kiowa County: Fred Poulter No. 1 P. Earles, NW cor. section 6-6-16w, machine; Burns & Moore No. 1 Block, NW NE SW section 31-6-16w, wildcat, shut down at 50 feet; Crabtree and others No. 1 Schieloh, SE NE SE section 28-7-20w, machine; DeBolt No. 1 Burnett, NW SE NE section 30-7-20w, wildcat, shut down at 40 feet.

Pick-up Oil Hearing

AUSTIN, Tex., Sept. 28.—The Third Court of Civil Appeals has set October 28 for arguments in a suit of the Railroad Commission against W. D. Lacy involving East Texas trapped oil.

The commission denied Lacy tenders on 14,000 bbls. of pick-up oil for the Lacy reclamation plant at Kilgore, contending he had failed to file daily reports and an application for a permit to trap the fugitive oil when it was discovered, Lacy stated a former representative of the commission in East Texas said the reports were not required.

Contending the oil was not fugitive, the commission replied no employe could suspend its rules. A district court held against the commission but an injunction prohibiting interference with movement of the oil was suspended during the appeal.

From left to right: Dewey Jordan, superintendent in charge of Kansas production for Atlantic Oil Producing Co.; Dick Ragan, material man, and S. K. Myers, production foreman, same company

Texas and Louisiana Gulf

By
F. L. SINGLETON

WORLD'S DEEPEST PRODUCER FLOWING 193 BBLS. PER DAY

HOUSTON, Tex., Sept. 26.—While a new hole was being drilled at the prospective pool opener of the Bammel Prospect in Harris County, due to a bad fishing job, interest along the Gulf Coast shifted to the Cotton Lake field in Chambers County and the Amelia and Nome fields in Jefferson County where scheduled production tests were expected to add additional acreage for development.

In the Cotton Lake field, Chambers County, preparations were being made to test Glenn H. McCarthy's No. 3 Kilgore, an east offset to the discovery well. Sand was cored from 6,338-50 feet, the top 4 feet being oil sand and the balance salt water sand. Five and a half inch casing will be cemented at 6,350 feet and a production test is to be made through perforated casing in the top sand section. With one dry hole west of the discovery and the present test showing a very thin sand section, little encouragement is given Humble Oil & Refining Co. No. 1 Dutton, an east offset to No. 3 Kilgore, which is coring below 6,300 feet in shale with no shows of oil or gas reported. The discovery well was completed in sand from 6,296-6,308 feet.

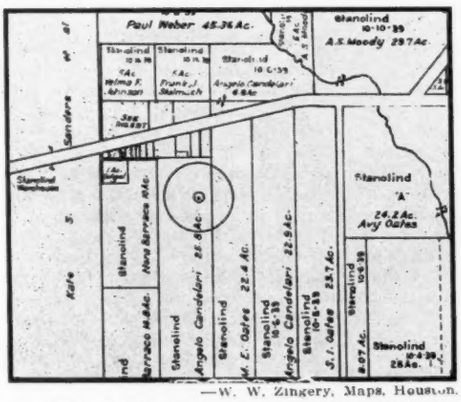
The completion of two wells at the Nome field, Jefferson County, was being watched as Shell Petroleum Corp. and Sun Oil Co. prepared to complete their No. 1 Paggi and No. 2 Long. No. 1 Paggi is bottomed in sand at 6,055 feet and 7-inch casing was cemented at 6,007 feet. It is located between the company's No. 1 Carpenter, the discovery well, and Sun Oil Co. No. 2 Paggi in the J. W. Kirby Survey. West of production in the John Blair Survey, Sun Oil Co. No. 2 Long topped the sand at 5,998 feet and is bottomed in sand at 6,007 feet with 7-inch casing cemented at 5,989 feet. The rig for No. 2 Long will be moved in for No. 1 Long-Maubles, located 466 feet from the south and east lines of a 136-acre tract in the J. Blair Survey.

Extension Test

Two and a half miles northwest of production at the Amelia field, Jefferson County, Glenn H. McCarthy's No. 2-A B. M. Longe tested gas through perforated casing at 6,090 feet, and preparations were being made to perforate lower in hopes of getting oil production in a section of sand that is bottomed at 6,107 feet. The well is situated about 200 feet southeast of the operator's No. 2 Long, which blew out and cratered, and if productive it will set off an extensive drilling campaign in this particular section of the field. To the southeast, offsetting Humble Oil & Refining Co. No. 1 Peveto, a recent southwest extension well, the same company's No. 1 Tyrell-Combest Realty Co., located in the E. Savery Survey, topped the sand at 6,735 feet and was completed at 6,779 feet for an initial production of 5 bbls. per hour through a quarter-inch choke, but due to the high gas-oil ratio it will be killed and reworked.

The Fairbanks field, northwest of Houston in Harris County, received its second producer with the completion of Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Carpenter, an east offset to the discovery well in the Francis Fry Survey. Bottomed in the Cockfield sand at 6,862 feet, with 7-inch casing cemented at 6,868 feet, it was completed through perforated casing from 6,831-34 feet for an initial production of 151 bbls. of 40.4 gravity oil per day through various chokes ranging from 10/64 to one-quarter inch with tubing pressure 2,275 pounds and casing pressure 2,500 pounds.

Approximately 12 miles northwest on the Bammel Prospect in the C. Walters Survey, Bunte Oil & Gas Co. and others No. 1 N. M. Graves is drilling in a sidetracked hole. It failed to recover the drill stem which was stuck at 2,600 feet last week while the operators were reaming, preparatory to making a drill-stem test in the Cockfield sand from 6,423-28 feet which carried a gas and distillate taste. The well is reported to be checking higher than four dry holes drilled to the northwest and considerable trading has been going on in that area. Of particular importance in this county is the wildcat test being drilled by Stanolind Oil & Gas Co. on the Green Bayou Prospect, located in the Reels and Trobough Survey on the Angelo Candelari lease. The Heterostegina and Marginulina is reported to have been topped "high" and it is drilling ahead below 5,142 feet. The test is said to be located on a "geophysical high" and has been checked several times by various companies.


Paul Weber 45.36 Ac.
Stanolind 10-10-39 A.S. Moody 29.7 Ac.
Stanolind 10-6-39 Angelo Candelari 4.64 Ac.
Stanolind 10-6-39 Angelo Candelari 25.64 Ac.
Stanolind Nova Barrasso 10.46 Ac.
Stanolind 10-6-39 M. E. Oates 22.4 Ac.
Stanolind 10-6-39 Angelo Candelari 22.5 Ac.
Stanolind 10-6-39 J. I. Oates 23.7 Ac.
Stanolind 10-6-39 8.07 Ac.
Stanolind 10-6-39 25 Ac.
Stanolind "A" 24.2 Ac. Avg Oates
Sanders
Kirby

—W. W. Zingery, Maps, Houston.

Plat of the Green Bayou Prospect, Harris County, showing location of Stanolind Oil & Gas Co.'s interesting wildcat which is being watched with interest

In the Magnet Field

Texas Crusader Oil Co. and Cockburn Oil Corp. No. 1 H. C. Cockburn which two weeks ago opened the Magnet field, in southern Wharton County and was killed to work over, due to salt water intrusion, pulled screen and liner and perforated from 5,535-37 feet with nine holes and squeezed in 25 sacks of cement and the crew is waiting for cement to harden. Apparently the operators are of the opinion that the water is coming from above the sand as the well was tested through perforations at 5,552-61 feet. To the north at the Lance City Prospect, same operators' No. 1 Hawes and Neal in the Sylvenus Castleman Survey is waiting on cement at a depth of 975 feet.

Two producers were completed by Skelly Oil Co. at the Van Vleck field in Matagorda County and a third test had reached the 8,200-foot sand. No. 10-B Cobb was completed at a depth of 7,490 feet through perforated casing from 7,486-88 feet, for an initial production of 628 bbls. through a quarter-inch choke with working pressure on the tubing 1,300 pounds and shut-in casing pressure 1,500 pounds. In the southern part of the field, No. 2 Metzger made a squeeze-out cement job at 8,255-63 feet and reperforated the liner from 8,255-62 feet, and in 22 hours it flowed 215 bbls. of pipe line oil through a three-sixteenths inch choke with tubing pressure 1,050 pounds and casing pressure 1,000 pounds. No. 9-B Cobb cored sand from 8,263-73 feet and is bottomed at 8,291 feet and 5½-inch O.D. blank liner is being run. This will be the third well to be completed in the 8,200-foot sand.

Plymouth Oil Co. No. 1 J. J. Welder, located in the S. A. Baldwin Survey, attracted some attension when it tested 650 pounds of working pressure and 30 feet of mud carrying a distillate odor on a seven-minute drill stem test from 5,666-5,727 feet. It is coring ahead. The same company has derrick up for another wildcat being No. 1 Welder, located in the S.A.&M.G. Survey.

In the south extension area of the Dickinson field, Galveston County, Kenben Oil Co. No. 2 Maco Stewart was completed through perforated casing at a plugged back depth of 8,515 feet for an initial production of 118 bbls. of pipe line oil per day through a quarter-inch choke with tubing pressure 1,450 pounds and shut-in casing pressure 1,650 pounds. Gravity of the oil tested 42. To the north in the J. S. Jones, Smith and McDannald are moving in material for No. 1 Shelor located 512 feet southwest of Pure Oil Co. No. 1 Shelor.

Garwood Area

In the Garwood area, southern Colorado County, the outcome of a drill-stem test, scheduled to be made at Sterling Oil & Refining Co. and others No. 1 May C. South, was being watched with interest. After four unsuccessful drill-stem tests were made from 6,037-6,125 feet, the operators were reaming to make another test from 6,113-25 feet, after 15 stands of gas-cut mud were recovered on a nine-minute test from 6,113-20 feet. Location is in section 41, I.&G.N. Survey.

Another attractive wildcat is Shell Petroleum Corp.'s No. 1 Maco Stewart, located on the Hitchcock Prospect, Galveston County, where Shell Petroleum Corp. is running 7-inch liner to 9,172 feet. Considerable interest is centered on this test, which has encountered several encouraging showings of oil and gas. It is located southeast of the Dickinson field in the J. Spillman Survey and is scheduled to be drilled to 10,000 feet.

Harrison & Abercrombie and others No. 1 Armstrong Plantation, which opened up the world's deepest commercial production at the Old Ocean field in Brazoria County, flowed 193 bbls. of distillate and 4 bbls. of wash water through a quarter-inch choke with working pressure 3,800 pounds. It is producing from 30 feet of sand bottomed at 9,903 feet.

South Louisiana

The Jennings field, in Acadia Parish, Coastal Louisiana's oldest producing field, was the feature development in that district the past week where Superior Oil Producing Co. No. 1 Leckett is preparing to test a deep sand that is expected to open production for the west flank of the field. Sand showing oil was cored from 6,352-67 feet and the hole is bottomed at 6,380 feet with 7-inch casing cemented at 6,342 feet. Interest in this old field has been revived several times by the drilling of flank wells around the edges of the salt dome. The field has produced several million barrels of oil from the shallow sand on top of the dome and the first deep production was opened seven years ago by the Yount Lee Oil Co. on the southeast flank and recently on the south flank by the completion of Shell Petroleum Corp. No. 1 Conover. No. 1 Leckett is located on a 142-acre lease in the NE quarter of section 42-9s-2w. On the southeast flank, Stanolind Oil & Gas Co. was testing No. 16 Houssiere-Latrielle in section 47, bottomed in sand

at 7,222 feet with 7-inch casing cemented at 7,128 feet.

One producer and one completion was reported for the Jeanerette field in St. Mary Parish by Herton Oil Co. No. 5 Banta located 200 feet north of Bayou Teche in section 13 cored oil sand from 6,660-87 feet, the total depth, and was completed through perforated casing from 6,627-72 feet for an initial production of 172 bbls. in 12 hours through a three-sixteenths inch choke with tubing pressure 1,000 pounds. Derrick is up for No. 2 Carter located 443 feet south and 1,613 feet east of common corner of Lots 12-13 in section 38-13s-9e. In the same parish but 4 miles west at the Charenton field, Mike Hogg and others have the derrick up for No. 1 State located in the center of Bayou Teche.

Buhler Prospect

On the Buhler Prospect, west of Lake Charles in Calcasieu Parish, General Crude Oil Co. No. 1 Buhler in section 30-8s-9w, is drilling in shale below 6,308 feet and is reported to be checking high based on the Discorbis and Heterostegina markers. To the east in Jefferson Davis Parish, Stanolind Oil & Gas Co. No. 1 Calcasieu National Bank is drilling in shale below 9,900 feet with no shows reported. It will be drilled to 10,000 feet before any attempt will be made to test the numerous showings that have been recorded on electrical coring tests.

In the old Houma gas field in Terrebonne Parish, J. P. Beck and others No. 1 Realty Operators was completed through perforated casing from 1,368-72 feet and 1,353-67 feet, for an estimated 500,000 feet of dry gas daily with casing pressure 300 pounds. Location is in section 103-17s-17e.

Continental Oil Co.'s deep test at Abbeville in Vermilion Parish is preparing to cut and pull drill stem which became stuck after the well tried to blow out when 5 feet of gas sand was cored from 11,727-32 feet, the total depth. No. 1 O. C. Hebert is located in section 20-12s-3e.

Michigan Fields

(Continued from Page 62)

Midland Petroleum & Gas Co. finished the No. 1 Cornell, C SE NW section 9-12n-7w, for an open flow capacity of 45,000,000 feet daily. Michigan Stray sand was topped at 1,268 feet, gas at 1,270 feet and the well completed at 1,303 feet.

Prudential Oil & Gas Corp. also added a flow of 8,000,000 feet daily in the No. 1 Shippey, C SE NE section 6, Belvidere Township.

Dry Holes

Four wildcat tests proved dry holes last week in addition to three "dusters" already mentioned, and one abandoned test.

A. Hansen No. 1 fee, SE SE SE section 26-17n-5w, Surrey Township, Clare County, was dry in the Dundee but was to be plugged back to test a show of gas in the Antrim shale.

H. E. Bell No. 1 Loyal D. Arthur, NW SW NW section 29-6n-1w, Victor Township, Clinton County test, was dry at a total depth of 2,995 feet. Though water was first encountered about 70 feet in the limestone drilling was continued another 72 feet before it was decided to abandon the project.

Bottom water was struck at about 3,800 feet by Daily Crude Oil Co. in the No. 1 Hoffman, NW SW SE section 9-16n-7w, Fork Township, Mecosta County test drilled to 3,810 feet before abandoned. No Dundee limestone was logged.

McPherson & Co. chalked up another failure in repeated unsuccessful attempts to develop oil production in Gratiot County when the No. 1 Elsie State Bank, NW SW SE section 11-9n-1w, Elba Township, was declared a dry hole.

Operators were still hopefully watching Max Pray and his No. 1 Wittig, SE SE SE section 23-11n-1w, Lafayette Township, Gratiot County test, cased at 3,080 feet and ready to drill into the Dundee.

T. F. Caldwell, Inc., started to plug back to Berea in the No. 1 Mutch, NE SE SE section 17-19n-4e, Deep River Township, Arenac County test, after failing to develop commercial oil production in lower formations.

New Locations

Six new wildcat locations were included among 13 state permits issued by the conservation department.

McClanahan Oil Co. will drill the No. 1 Charles Seignious, SE SW SE section 3-20n-4e, about half a mile west of the 5,000,000-foot wildcat gasser recently completed in the same township and heralded the discovery well of a Berea gas field in East Michigan.

Mountain Oil & Gas Co. took out a permit for the No. 1 Jack Thompson, SE SE NE section 17-15n-6w, Sherman Township, Isabella County, calling for a Dundee test but located less than 3 miles north of the Broomfield Township, Isabella County gas field.

Fletcher and Lehman have joined the group of operators seeking gas in Richland Township, Montcalm County, over a period of years taking out a permit for the No. 1 Jessie I. Ashbaugh, C NW SW section 1-12n-7w.

Two permits for new wildcat tests in Saginaw County were issued as follows: Humo Oil Corp. and J. J. Morehouse No. 1 Louis Schwinger, NW NE SW section 5-11n-6e, Frankenmuth Township, and Jaenicke Oil Co. No. 1 D. Moulton, SW NW SW section 31-12n-2e, Richland Township.

Henry L. McEvoy will drill the No. 1 A. N. Palmeter, NE NW NE section 18-9n-1w, Elba Township, Gratiot County.

H. E. Bell and Noah Andrews also are reported planning a new wildcat test in section 17, Fremont Township, Isabella County, on the Lelow farm 2 miles east of a Pure Oil Co. unsuccessful test about a year ago.

Eastern Fields

(Continued from Page 58)

In Monongalia County, Philadelphia Oil Co. completed No. 5,407 J. J. Moore, Clay district, at 3,375 feet, Bayard sand. It is making about 4 bbls. a day with 152,000 feet of gas.

In Grant district, Ritchie County, Bristol Oil & Gas Co. No. 6 A. J. Null, drilled down from the Maxon sand to the Injun sand at 1,816 feet, is good for 30 bbls. a day and 500,000 feet of gas.

In Wood County, Four States Oil Co. completed No. 4 Conrad Lenhart, Walker district, in Maxon sand at 1,578 feet as a 5-bbl. well.

In Center district, Gilmer County, McCall Drilling Co. No. 2 A. N. Zada Stump, reached Salt sand at 1,382 feet, with a showing of 2 bbls. a day, but the well is being drilled deeper.

Gas Wells

In Boone County, in the gas area in Washington district, the Pond Fork Oil & Gas Co. drilled No. 24 Cole and Crane to 2,010 feet and it was dry.

In Gilmer County, Massey & Jarvis completed a gasser on the I. H. Kissner farm in Troy district in Injun sand at 2,082 feet, gauging 176,000 feet a day. Big Injun sand was at 1,520-1,615 feet, with the gas at 1,525-45 feet. On Big Ellis in Glenville district, McCall Drilling Co., on the John Tomey farm, found Big Injun at 1,895-1,990 feet; Squaw sand, 1,992-2,050 feet and 20,568 feet of gas at 2,038-43 feet.

In Lincoln County, Maebon & Huffman deepened the test on the C. E. Gillenwaters farm in Carroll district to 3,793 feet, Brown shale. There was about 40,000 feet of gas a day at 3,370 feet.

In Marion County, Victor E. Tennant deepened No. 2 Mary A. Moore, Paw Paw district, to 3,056 feet. It was dry, there being no Fifth nor Bayard sand.

In Wetzel County, C. B. Lewis and others on the L. B. Rush farm in Proctor district have a gas well in the Maxon sand gauging 356,000 feet a day. Pay was at 1,799-1,807 feet.

New Work

In Boone County, E. R. Cameron is drilling deeper on the Morrisville Church lot, Horse Creek, Scott district. In Sherman district, Pure Oil Co. has a rig up for No. 85 Federal Coal Co. lease on Hopkins Fork.

In Cabell County, the DeJarnette Gas Co. made a location for No. 2 J. H. DeJarnette, in McComas district. Shale Gas Co. is drilling No. 2 Hatfield and Vanoy lease, same district.

In Calhoun County, Hope Construction & Refining Co. has started drilling on the J. S. Riggs farm in Lee district. Starcher & Richards are drilling on the Stella Campbell farm on Little Creek of West Fork. In Center district, Godfrey L. Cabot, Inc., is spudding No. 8 Allen Hardman.

In Gilmer County, Chartiers Oil Co. is deepening No. 15 Daniel Huffman farm, and drilling at 1,504 feet.

In Jackson County, Mountain Iron & Supply Co. has started drilling No. 3 J. W. Kettry and others farm, Washington district.

In Kanawha County, Winifrede Co. is drilling a second test on the McConihay heirs farm in Cabin Creek district on Fields Creek. The Pure Oil Co. is drilling No. 266 Williams Coal Co.

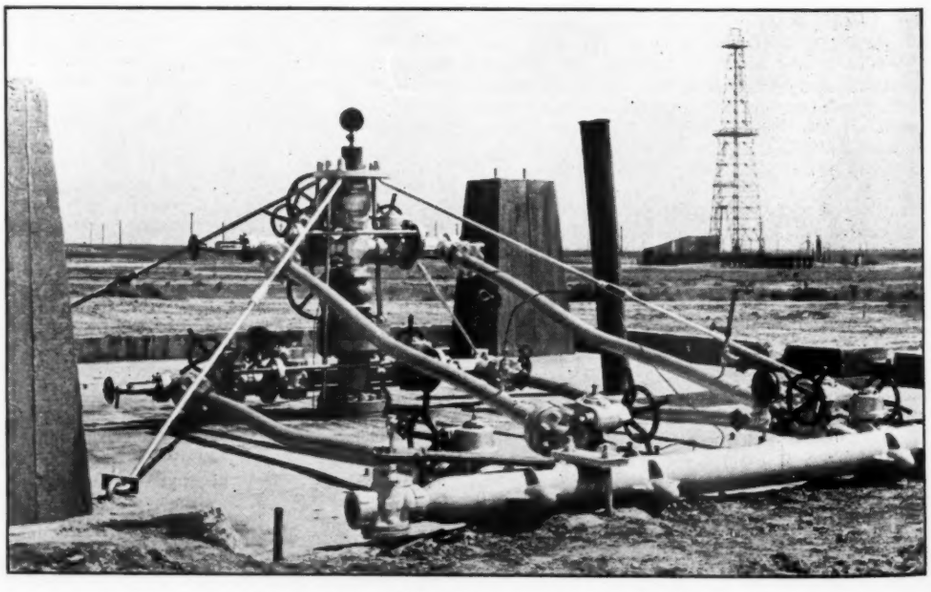
In Ritchie County, Grant district, R. C. Jackson has started drilling on the J. M. Lewis farm.

In Roane County, J. T. Campbell is drilling on the W. S. Fouty and others lease in Curtis district.

In Wetzel County, Hathaway & Lewis are drilling on the Alice Rush farm in Proctor district, and Carnegie Natural Gas Co. is drilling on the J. G. Cochran farm on Brown Run in Clay district.

VIRGINIA

After a long shutdown, Benedum & Trees have commenced drilling the test on the Clinchfield Coal & Coke Co. lease in Russell County, Virginia. Considerable difficulty was overcome in cleaning this test out to bottom which was at 5,990 feet. Tools are now working at 6,000 feet.



Christmas tree of Union Oil Company's No. 19 Belridge

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 16 Capitan, Santa Barbara Co.	32- 5-30	582	sd. sh. drlg.
Shell Oil Co., No. 4 Capitan, Santa Barbara Co.	32- 5-30	1,758	rig. to pump
General Pet. Corp., No. 16 Capitan, Santa Barbara Co.	32- 5-30	2,920	flow. gas
Texas Co., No. 1 Capitan, Santa Barbara Co.	1- 4-31	721	sd. sh. drlg.
Barnsdall-Rio Grande, No. 1 Elwood, Santa Barbara	15- 4-29	3,505	redrlg. 3,486
Signal Oil Co., No. 8 Elwood, Santa Barbara Co.	tideland	1,520	sd. sh. drlg.
Bush Oil Co., No. 2 Santa Maria, Santa Barbara Co.	25-10-34	4,340	flow. 2,255 b.d.
Field Gasoline Corp., No. 1 Santa Maria, Santa Barbara	21- 9-33	2,176	sd. sh. drlg.
Apache Oil Co., No. 1 Santa Maria, Santa Barbara Co.	31- 9-33	3,151	sd. sh. drlg.
Valley Oil Co., No. 1 Santa Maria, Santa Barbara Co.	18-10-33	147	idle
Union Oil Co., No. 1 Santa Maria, Santa Barbara Co.	24-10-34	1,215	cmtd. 1,215
Union Oil Co., No. 11 Santa Maria, Santa Barbara Co.	26- 9-34	3,470	sd. sh. drlg.
Todos Santos Oil Co., No. 1 Casmalia, Santa Barbara	29- 9-34	1,530	sd. sh. drlg.
Field, O. C., No. 1 Lompoc, Santa Barbara Co.	11- 7-33	2,027	idle
Moore, Inc., No. 1 Santa Maria, Santa Barbara Co.	25-10-35	6,597	repair mach.
Top Row Oil Co., No. 1 Lompoc, Santa Barbara Co.	10- 6-35	987	hd. sd. drlg.
Bankline Oil Co., No. 1 Coal Oil Pt., Santa Barbara	tideland	5,510	P.B. 4,200
Calkan Pet. Co., No. 1 Sespe, Ventura Co.	23- 5-20	904	cleaning out
Merghants Pet. Co., No. 7 Sespe, Ventura Co.	1- 4-20	140	sd. sh. drlg.
Texas Co., No. 131 Shiells, Ventura Co.	4- 3-19	3,355	will deepen
El Rancho Oil Co., No. 1 Sespe, Ventura Co.	9- 3-19	5,107	will P.B.
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	2,200	cmtd.
Wasibi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	998	cleaning out
Oil Ridge Oil Co., No. 1 Hopper Canyon, Ventura Co.	6- 4-18	2,630	hd. sd. drlg.
Bolsa Chica Oil Co., No. 4 Temescal, Ventura Co.	1- 4-18	2,674	sd. sh. drlg.
Sunset Oil Co., No. 1 Temescal, Ventura Co.	21- 4-18	1,864	sd. sh. drlg.
Rennie Brothers, No. 1 Santa Paula, Ventura Co.	21- 4-21	1,040	will cmt.
Munding, J. J., No. 1 Ojai, Ventura Co.	22- 4-22	959	sd. sh. drlg.
Texas Co., No. 1 Saticoy, Ventura Co.	1- 2-22	4,185	gr. sd. drlg
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	9,525	O.S. drlg.
Vaca Oil Co., No. 1 Oxnard, Ventura Co.	5- 1-21	2,822	tar sand
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	7,040	C.P. 6,610
General Pet. Corp., No. 1 Javon, Ventura Co.	15- 3-24	2,023	reaming
Continental Oil Co., No. 2 Javon, Ventura Co.	15- 3-24	4,841	sd. sh. drlg.
C. C. M. Oil Co., No. 1 Javon, Ventura Co.	15- 3-24	5,931	P.B. 5,855
Honolulu Oil Corp., No. 1 South Mountain, Ventura Co.	23- 3-21	3,998	sd. sh. drlg.
Associated Oil Co., No. 25 V.L.W. Ventura, Ventura Co.	23- 3-23	5,723	sd. sh. drlg.
Associated Oil Co., No. 30 V.L.W. Ventura, Ventura Co.	24- 3-23	4,772	sd. sh. drlg.
Shell Oil Co., No. 28 Edison Ventura, Ventura Co.	21- 3-23	6,743	O.S. drlg.
Shell Oil Co., No. 88 Taylor Ventura, Ventura Co.	30- 3-23	6,808	O.S. drlg.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	1,287	redrlg. 1,075
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	6,887	P.B. 5,537
Associated Oil Co., No. 4 Lost Hills, Kern Co.	1-26-20	4,500	sd. sh. drlg.
Associated Oil Co., No. 5 Lost Hills, Kern Co.	2-26-20	1,785	P.B. 1,700
Universal Oil Consd., No. 1 Lost Hills, Kern Co.	20-26-21	3,498	sd. sh. drlg.
East Puente Oil Co., No. 22 McKittrick, Kern Co.	11-30-21	2,342	gr. sd. drlg.
Woodward, Hoke, No. 6 McKittrick, Kern Co.	11-30-21	1,162	sd. sh. drlg.
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	1,465	sd. sh. drlg.
General Pet. Co., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Rio Grande Oil Co., No. 1 Belridge, Kern Co.	18-28-20	2,545	P.B. 1,400
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	8,232	hd. sh. drlg.
Belridge Oil Co., No. 12-1 North Belridge, Kern Co.	1-28-20	847	cmtd. 847
Belridge Oil Co., No. 5-1 North Belridge, Kern Co.	1-28-20	5,385	br. sh. drlg.
Shell Oil Co., No 1 Antelope Plains, Kern Co	5-28-20	3,410	sd. sh. drlg.
Continental Oil Co., No. 8 North Belridge, Kern Co.	36-27-20	7,485	hd. sh. drlg.
Associated Oil Co., No. 21 Kern Front, Kern Co.	23-28-27	2,200	water witch
Associated Oil Co., No. 31 Kern Front, Kern Co.	23-28-27	1,934	pump. 91 b.d.
Big Eleven Oil Co., No. 1 Kern Front, Kern Co.	18-28-28	1,291	sd. sh. drlg.
National Oil Co., No. 3 Kern Front, Kern Co.	11-28-27	1,720	to deepen
Honolulu Oil Corp., No. 89 Kern Front, Kern Co.	8-28-27	2,141	sd. sh. drlg.
McDonald & Dearin, No. 3 Kern Front, Kern Co.	11-28-27	....	rigging up
Republic Pet. Co., No. 11 Kern Front, Kern Co.	24-28-27	2,050	pump. 295 b.d.
Italo Pet. Corp., No. 33 Kern Front, Kern Co.	16-28-27	2,900	O.S. drlg
Seven Spot Oil Co., No. 1 Kern Front, Kern Co.	13-28-27	1,970	bailed dry
Vega Oil Co., No. 2 Kern Front, Kern Co.	11-28-27	2,225	sd. sh. drlg.
Union Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	2,354	cmtd. 1,830
Kaar, Charles, No. 1 Kern Front, Kern Co.	26-28-27	2,208	O.S. drlg.
Bell Corp., No. 2 McVan, Kern Co.	14-27-27	1,218	bailing
Harp, E. J., No. 1 Dominion, Kern Co.	27-26-28	1,432	tested wet
Vanguard Oil Co., No. 5 Mount Poso, Kern Co.	33-27-28	1,900	bailing
Shell Oil Co., No. 15 Mount Poso Security, Kern Co.	16-27-28	1,620	sd. sh. drlg.
Shell Oil Co., No. 28 Mount Poso Vedder, Kern Co.	9-27-28	1,860	pump. 250 b.d.
Shell Oil Co., No. 29 Mount Poso Vedder, Kern Co.	9-27-28	1,844	rig. to pump
General Pet. Corp., No. 8 Mount Poso Heisen, Kern Co.	16-27-28	1,240	sd. sh. drlg.
Bethlehem Expl. Co., No. 2 Mount Poso, Kern Co.	10-27-27	1,570	will C.P.
Bargol Oil Co., No. 3 Mount Poso, Kern Co.	11-27-27	1,194	cleaning out
Union Oil Co., No. 1-B Mount Poso Tribe, Kern Co.	28-27-28	1,908	O.S. drlg.
Doyle Pet. Co., No. 1 Jasmine, Kern Co.	15-25-27	2,920	bailing
Hall-Baker Co., No. 27-1 Jasmine, Kern Co.	27-25-27	1,970	dry; abd.
Hall-Baker Co., No. 20-1 Jasmine, Kern Co.	20-25-27	140	sd. sh. drlg.
Elbee Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,805	bailing
Magnet Oil Co., No. 5 Fruitvale, Kern Co.	21-29-27	2,885	sd. sh. drlg.
Western Gulf Oil Co., No. 31 Fruitvale, Kern Co.	27-29-27	515	cmtd. 515
Miami Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	2,891	sd. sh. drlg.
Mohawk Oil Co., No. 23-3 Fruitvale, Kern Co.	23-29-27	3,133	pump. 170 b.d.
Oil Incorporated, No. 1 Fruitvale, Kern Co.	26-29-27	3,390	will C.P.
Nydia Pet. Co., No. 2 Fruitvale, Kern Co.	26-29-27	3,410	tested wet
Allied Pet. Co., No. 20 Mountain View, Kern Co.	19-30-29	3,980	sd. sh. drlg.
Barnsdall Oil Co., No. 8 Mountain View, Kern Co.	19-30-29	4,972	P.B. 4,875
Buffalo Oil Co., No. 4 Mountain View, Kern Co.	19-30-29	3,987	sd. sh. drlg.
Hogan Pet. Co., No. 16 Mountain View, Kern Co.	32-30-29	6,159	pump. water
Hogan Pet. Co., No. 18 Mountain View, Kern Co.	32-30-29	3,872	sd. sh. drlg.
Sheldon Oil Co., No. 2 Mountain View, Kern Co.	19-30-29	4,585	sd. sh. drlg.
Standard Oil Co., No. 32 Mountain View, Kern Co.	13-30-28	5,150	sd. sh. drlg.
Shell Oil Co., No. 11 Mountain View, Kern Co.	32-30-29	5,850	sd. sh. drlg.
Mohawk Pet. Co., No. 3 Mountain View, Kern Co.	30-30-29	5,770	will deepen
Mohawk Pet. Co., No. 4 Mountain View, Kern Co.	30-30-29	5,998	C.P. 5,950
Mohawk Pet. Co., No. 8 Mountain View, Kern Co.	30-30-29	4,767	sd. sh. drlg.
Mohawk Pet. Co., No. 2 Arvin, Kern Co.	10-31-29	4,087	sd. sh. drlg.
General Pet. Corp., No. 1 Arvin, Kern Co.	26-31-29	6,530	sd. sh. drlg.
Associated Oil Co., No. 1 Arvin, Kern Co.	3-31-29	4,955	sd. sh. drlg.
Shell Oil Co., No. 1 Arvin, Kern Co.	15-31-29	5,792	sd. sh. drlg.
Ohio Oil Co., No. 1-E Rio Bravo, Kern Co.	19-30-26	3,920	sd. sh. drlg.
Associated Oil Co., No. 1 Rio Bravo, Kern Co.	30-29-25	4,400	sd. sh. drlg.
Standard Oil Co., No. 11-1 Rio Bravo, Kern Co.	19-29-26	1,180	sd. sh. drlg.
Plute Holding Co., No. 1 Round Mountain, Kern Co.	17-28-29	716	sd. sh. drlg.
Shell Oil Co., No. 10 Caldwell Round Mountain, Kern	7-28-29	1,515	pump. 225 b.d.
Shell Oil Co., No. 1-8 Olcese Round Mountain, Kern Co.	17-28-29	1,287	sd. sh. drlg.
Cole & Wood, No. 1 Edison, Kern Co.	24-30-29	821	P.B. 800
Buffalo Oil Co., No. 2 Edison, Kern Co.	24-30-29	797	pump. dry
Jergins Trust, No. 23-4 Edison, Kern Co.	23-30-29	1,876	sd. sh. drlg.
Jergins Trust, No. 23-5 Edison, Kern Co.	23-30-29	2,443	P.B. 1,995
Wood-Callahan Oil Co., No. 5 Edison, Kern Co.	23-30-29	2,171	C.P. 1,992-2,130
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	1,100	br. sh. drlg.
Texas Co., No. 1 San Emidio, Kern Co.	11-11-22	9,400	sd. sh. drlg.
Standard Oil Co., No. 10-1 Stevens, Kern Co.	20-30-26	6,587	sd. sh. drlg.
Shell Oil Co., No. 2 Stevens, Kern Co.	29-30-26	8,403	O.S. drlg.
Fenray Oil Co., No. 1 Midway-Sunset, Kern Co.	34-32-24	4,210	sidetrack. D.P.
C. C. M. Oil Co., No. 1-28 Midway-Sunset, Kern Co.	28-32-23	3,161	br. sh. drlg.
C. C. M. Oil Co., No. 19-21 Midway-Sunset, Kern Co.	21-32-23	1,871	sd. sh. drlg.
Evans, H. B., No. 11 Midway-Sunset, Kern Co.	35-32-23	2,330	will cmt.
Safeway Oil Co., No. 1 Midway-Sunset, Kern Co.	26-32-23	2,815	P.B. 2,770
Garner Royalties, No. 7 Midway-Sunset, Kern Co.	22-32-23	1,651	water witch
Hallmark Oil Co., No. 5 Midway-Sunset, Kern Co.	25-12-24	1,295	sd. sh. drlg.
Quality Oil Co., No. 3 Midway-Sunset, Kern Co.	22-32-23	2,150	pump. 590 b.d.
General Pet. Corp., No. 32-5 Midway-Sunset, Kern Co.	32-32-24	3,075	pump. 172 b.d.
Zamloch, Carl, No. 1 Midway-Sunset, Kern Co.	22-32-23	1,866	sd. sh. drlg.
Standard Oil Co., No. 3-25-L Midway-Sunset, Kern Co.	25-12-24	3,224	cleaning out
Standard Oil Co., No. 20-33-D Midway-Sunset, Kern Co.	26-12-24	2,855	sd. sh. drlg.
Standard Oil Co., No. 18 Midway-Sunset, Kern Co.	33-32-24	2,638	pump. 160 b.d.
Five Points Oil Co., No. 2 Midway-Sunset, Kern Co.	18-11-23	1,571	sd sh. drlg.
Pomoc Oil Co., No. 8 Midway-Sunset, Kern Co.	15-32-23	1,764	sd. sh. drlg.
Goldman, Frank, No. 3 Midway-Sunset, Kern Co.	22-32-23	1,760	sd. sh. drlg.
Birch-Ranch Oil Co., No. 1 Midway-Sunset, Kern Co.	22-32-23	1,150	sd. sh. drlg.
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	17-31-23	3,786	idle
Pan American, No. 66 Midway-Sunset, Kern Co.	22-32-23	2,231	sd. sh. drlg.
Texas Co., No. 16 Midway-Sunset, Kern Co.	32-32-24	2,192	sd. sh. drlg.
North American, No. 3 Midway-Sunset, Kern Co.	2-32-24	3,273	hd. sh. drlg.
Associated Oil Co., No. 1 Tejon, Kern Co.	17-11-19	2,984	sd. sh. drlg.
Reserve Oil & Gas Co., No. 5 Tejon, Kern Co.	33-11-19	4,474	flow. 20 b.h.
Ohio Oil Co., No. 2 Tejon, Kern Co.	21-11-19	1,180	sd. sh. drlg.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	8,527	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	cleaning out
Shell Oil Co., No. 1 Kettleman North, Fresno Co.	36-21-17	8,807	flow. 150 b.d.
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	8,700	gr. sd. drlg.
K. N. D. A., No. 43-18-J Kettleman North, Fresno Co.	18-21-17	8,911	completing
K. N. D. A., No. 21-30-J Kettleman North, Fresno Co.	30-21-17	8,022	cmtd. 8,019
K. N. D. A., No. 52-30-J Kettleman North, Fresno Co.	30-21-17	600	sd. sh. drlg.
K. N. D. A., No. 58-28-J Kettleman North, Fresno Co.	28-21-17	6,195	br. sh. drlg.
K. N. D. A., No. 63-28-J Kettleman North, Fresno Co.	28-21-17	7,274	br. sh. drlg.
K. N. D. A., No. 81-24-H Kettleman North, Fresno Co.	24-21-16	8,895	completing
K. N. D. A., No. 83-24-H Kettleman North, Fresno Co.	24-21-16	8,775	will cmt.
K. N. D. A., No. 52-34-J Kettleman North, Kings Co.	34-21-17	4,782	sd. sh. drlg.
K. N. D. A., No. 72-34-J Kettleman North, Kings Co.	34-21-17	7,086	gr. sd. drlg.
K. N. D. A., No. 47-2-P Kettleman North, Kings Co.	2-22-17	7,085	fish. casing
K. N. D. A., No. 51-2-P Kettleman North, Kings Co	2-22-17	7,755	cleaning out
Standard Oil Co., No. 32-19-J Kettleman North, Fresno	19-21-17	8,661	hd. sd. drlg.
Standard Oil Co., No. 61-19-J Kettleman North, Fresno	19-21-17	8,890	redrlg. 8,840
Standard Oil Co., No. 72-19-J Kettleman North, Fresno	19-21-17	8,770	fish. D.P.
Standard Oil Co., No. 2-19-J Kettleman North, Fresno	19-21-17	4,563	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Standard Oil Co., No. 46-13-H Kettleman North, Fresno	13-21-16	6,663	sd. sh. drlg.
Standard Oil Co., No. 48-35-J Kettleman North, Kings	35-21-17	7,295	hd. sd. drlg.
Standard Oil Co., No. 46-19-V Kettleman Middle, Kings	19-23-19	5,894	br. sh. drlg.
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	3,601	gr. sd. drlg.
Milheim Oil Corp., No. 1 Tulare, Kings Co.	20-22-22	5,851	fishing
Associated Oil Co., No. 1 Avenal, Kings Co.	33-23-17	2,924	br. sh. drlg.
Foster, R. A., No. 1 Carriso, San Luis Obispo Co.	2-32-22	5,000	sd. sh. drlg.
United Oil Co., No. 2 Panorama, San Luis Obispo Co.	2-32-21	1,751	sd. sh. drlg.
Union Oil Co., No. 1 Huasna, San Luis Obispo Co.	22-32-15	1,146	sd. sh. drlg.
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	3,002	sd. sh. drlg.
Martin, J. D., No. 5 Pismo, San Luis Obispo Co.	5-32-13	3,050	sd. sh. drlg.
Birch-Royer Oil Co., No. 1 Pismo, San Luis Obispo Co.	33-31-13	2,130	sd. sh. drlg.
Crail Bros., No. 1 Pismo, San Luis Obispo Co.	8-32-13	3,792	dry; abd.
Barnsdall Oil Co., No. 1 Carriso Plains, S. Luis Obispo	24-28-17	5,087	idle
Standard Oil Co., No. 3 McDonald Island, San Joaquin	31- 2-5	4,931	sd. sh. drlg.
Shell Oil Co., No. 1 Pleyto, Monterey Co.	34-24-10	8,994	P.B. 8,750
Shell Oil Co., No. 2 Pleyto, Monterey Co.	34-24-10	1,642	sd. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	4,428	cmtd. 2,750
Amerada Pet. Co., No. 2 Rio Vista, Solano Co.	26- 4-2	6,133	salt water
Standard Oil Co., No. 2 Rio Vista, Solano Co.	27- 4-2	4,297	sd. sh. drlg.
Trico Oil & Gas Co., No. 1 Angiola, Tulare Co.	7-23-23	3,187	P.B. 1,800
Associated Oil Co., No. 1 Sargent, San Benito Co.	5-12-4	3,997	sd. sh. drlg.
Seaboard Oil Co., No. 1 Alameda, Alameda Co.	13- 3-3	3,816	hd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Marvin, J. L., No. 1 El Segundo, Los Angeles Co.	7- 3-14	7,521	will abdn.
Richfield Oil Co., No. 1 El Segundo, Los Angeles Co.	18- 3-14	3,670	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co.	10- 3-14	7,790	sd. sh. drlg.
Marl Oil Co., No. 1 Moneta, Los Angeles Co.	35- 3-14	7,175	sd. sh. drlg.
Little, J. L., No. 1 Moneta, Los Angeles Co.	30- 3-14	7,352	resume work
C. C. M. Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	3,865	sd. sh. drlg.
C. C. M. Oil Co., No. 8 Torrance, Los Angeles Co.	9- 4-14	3,550	redrlg. 3,200
Pongratz, Gus, No. 1 Torrance, Los Angeles Co.	6- 4-14	3,333	pump. 85 b.d.
Shepard, Harry, No. 1 Torrance, Los Angeles Co.	6- 4-14	722	cmtd. 722
Petrol Corp., No. 5 Torrance, Los Angeles Co.	6- 4-14	3,555	pump. 150 b.d.
Linderman Oil Co., No. 3 Torrance, Los Angeles Co.	31- 3-14	3,777	pump. 120 b.d.
M. W. Pet. Co., No. 1 Torrance, Los Angeles Co.	6- 4-14	3,132	cmtd. 3,127

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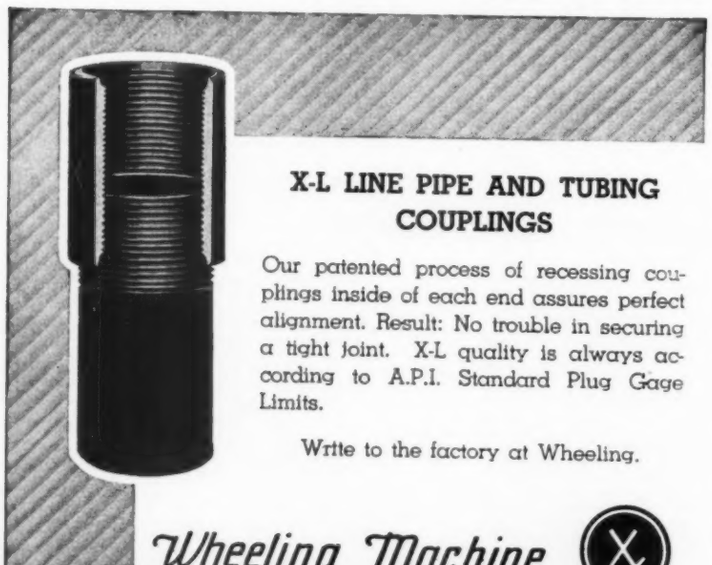
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Walken Oil Co., No. 3 Torrance, Los Angeles Co.	5- 4-14	3,706	pump. 100 b.d.
Shell Oil Co., No. 1 Kranz Torrance, Los Angeles Co.	32- 3-14	3,660	cmtd. 3,420
Collier, P. V., No. 1 Torrance, Los Angeles Co.	16- 4-14	3,781	to deepen
Emerald Oil Co., No. 1 Redondo, Los Angeles Co.	8- 4-14	3,791	cleaning out
Terry, George, No. 1 Redondo, Los Angeles Co.	8- 4-14	4,273	br. sh. drlg.
Standard Oil Co., No. 80 Inglewood, Los Angeles Co.	8- 2-14	3,574	sd. sh. drlg.
Standard Oil Co., No. 24 Inglewood Rubel, Los Angeles	8- 2-14	1,860	sd. sh. drlg.
Crude Oil Drlg. Co., No. 1 Gardena, Los Angeles Co.	31- 3-13	4,390	sd. sh. drlg.
West American, No. 1 Gardena, Los Angeles Co.	5- 4-13	5,130	sd. sh. drlg.
Shell Oil Co., No. 84 Dominguez Reyes, Los Angeles	33- 3-13	6,816	cmtd. 6,686
Union Oil Co., No. 8 Dominguez Carson, Los Angeles	33- 3-13	7,306	swabbing
Union Oil, No. 38 Dominguez Callender, Los Angeles	33- 3-13	7,393	P.B. 6,898
Union Oil, No. 47 Dominguez Callender, Los Angeles	33- 3-13	8,420	sd. sh. drlg.
Union Oil, No. 49 Dominguez Callender, Los Angeles	33- 3-13	5,441	flow. 260 b.d.
Union Oil, No. 50 Dominguez Callender, Los Angeles	33- 3-13	3,962	cleaning out
Continental Oil Co., No. 39 Seal Beach, Los Angeles	11- 5-12	6,445	completing
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	7,422	P.B. 7,200
Sharby Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	1,180	sd. sh. drlg.
Del Rey Drlg. Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,538	rig. to pump
Superior Oil Co., No. 1 Del Rey, Los Angeles Co.	25- 2-15	964	sd. sh. drlg.
Union Oil Co., No. 24 Del Rey, Los Angeles Co.	27- 2-15	....	bldg. rig
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	2,816	sd. sh. drlg.
Holbrook Pet. Co., No. 1 Newhall, Los Angeles Co.	28- 4-16	3,352	sd. sh. drlg.
Barnsdall Oil Co., No. 1 Newhall, Los Angeles Co.	26- 4-17	2,961	sd. sh. drlg.
Pomaco Royalty Co., No. 1 Palos Verdes, Los Angeles	1- 5-14	....	rigged up
Sunset Oil Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,640	cleaning out
Sovereign Oil Corp., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,689	pump. 150 b.d.
Pan American, No. 1 Wilmington, Los Angeles Co.	20- 4-13	5,751	sd. sh. drlg.
Bankline Oil Co., No. 1 Wilmington, Los Angeles Co.	34- 4-13	4,327	P.B. 3,698
General Pet. Corp., No. 1 Wilmington, Los Angeles Co.	4- 5-13	6,586	sd. sh. drlg.
Monarch Oil Corp., No. 1 Topango Canyon, Los Angeles	5- 1-16	1,564	sd. sh. drlg.
Woodward, J. A., No. 1 Montebello, Los Angeles Co.	4- 2-11	4,959	P.B. 3,100
Bush Oil Co., No. 1 Montebello, Los Angeles Co.	4- 2-11	3,461	sd. sh. drlg.
Standard Oil Co., No. 87 Montebello, Los Angeles Co.	1- 2-12	2,800	reaming
Standard Oil Co., No. 88 Montebello, Los Angeles Co.	2- 2-12	3,000	pump. 201 b.d.
Universal Consd., No. 8 Montebello, Los Angeles Co.	5- 2-11	7,471	recmtd. 5,538
Universal Consd., No. 9 Montebello, Los Angeles Co.	5- 2-11	5,951	P.B. 5,900
Universal Consd., No. 10 Montebello, Los Angeles Co.	5- 2-11	5,563	sd. sh. drlg.
Universal-Richfield, No. 1-J Montebello, Los Angeles	6- 2-11	3,540	sd. sh. drlg.
Republic Petroleum Co., No. 1 Montebello, Los Angeles	6- 2-11	5,950	sd. sh. drlg.
Richfield Oil Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	7,560	P.B. 5,970
Richfield Oil Co., No. 4 Montebello, Los Angeles Co.	6- 2-11	925	idle
St. Helens Pet. Co., No. 8 Montebello, Los Angeles Co.	5- 2-11	5,060	idle
St. Helens Pet. Co., No. 19 Montebello, Los Angeles Co.	2- 2-12	3,475	cmtd. 3,450
St. Helens Pet. Co., No. 20 Montebello, Los Angeles Co.	2- 2-12	3,467	cmtd. 3,430
St. Helens Pet. Co., No. 21 Montebello, Los Angeles Co.	2- 2-12	3,728	completing
Texas Co., No. 14 Montebello, Los Angeles Co.	6- 2-11	5,697	sd. sh. drlg.
Texas Co., No. 15 Montebello, Los Angeles Co.	6- 2-11	5,388	cmtd. 5,388
Keystone Oil Co., No. 1 Pico, Los Angeles Co.	9- 2-11	4,612	P.B. 4,470
Hathaway, No. 3 Fulton, Santa Fe Spgs., Los Angeles	6- 3-11	4,733	P.B. 4,130
General Pet., No. 46-D Santa Fe Springs, Los Angeles	6- 3-11	4,575	bailing
Ring Oil Co., No. 4 Santa Fe Springs, Los Angeles Co.	5- 3-11	4,908	tested wet
Union Oil Co., No. 31 Santa Fe Springs, Los Angeles	6- 3-11	4,070	sd. sh. drlg.
Union Oil Co., No. 34 Santa Fe Springs, Los Angeles	6- 3-11	4,075	cmtd. 4,075
Union Oil Co., No. 98 Santa Fe Springs, Los Angeles	6- 3-11	870	sd. sh. drlg.
Union Oil Co., No. 100 Santa Fe Springs, Los Angeles	6- 3-11	4,161	fish. D.P.
Union Oil Co., No. 101 Santa Fe Springs, Los Angeles	6- 3-11	887	cmtd. 867
Union Oil Co., No. 102 Santa Fe Springs, Los Angeles	6- 3-11	4,290	sd. sh. drlg.
Vanda Petroleum, No. 1 Santa Fe Springs, Los Angeles	6- 3-11	7,960	O.S. drlg.
Bernstein, M. E., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,897	sd. sh. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	2,985	sd. sh. drlg.
Associated Oil Co., No. 4 Huntington, Orange Co.	34- 5-11	4,050	to redrl.
Associated Oil Co., No. 8 Huntington, Orange Co.	34- 5-11	4,830	P.B. 4,240
Associated Oil Co., No. 2 Huntington, Orange Co.	34- 5-11	4,742	redrlg. 3,875
Pan American Pet. Co., No. 3 Huntington, Orange Co.	34- 5-11	3,999	fish. casing
Standard Oil Co., No. 12 Huntington, Orange Co.	12- 6-11	2,867	P.B. 2,900
Lucky Strike Oil Co., No. 7 Huntington, Orange Co.	2- 6-11	2,143	sd. sh. drlg.
Huntington Signal Oil Co., No. 1 Huntington, Orange	34- 5-11	4,000	sd. sh. drlg.
Shell Oil Co., No. 19 Brea, Orange Co.	2- 3-10	4,720	O.S. drlg.
West American Oil Co., No. 1 East Coyote, Orange Co.	24- 3-10	6,430	cleaning out
Continental Oil Co., No. 1 East Coyote, Orange Co.	20- 3-9	2,751	P.B. 2,740
Hancock Oil Co., No. 1 East Coyote, Orange Co.	17- 3-9	2,502	O.S. drlg.
West Coast Ref. Co., No. 1 Santa Ana, Orange Co.	25- 3-9	821	sd. sh. drlg.
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3-9	7,280	redrlg. 6,697
Union Oil Co., No. 30 Chapman Richfield, Orange Co.	30- 3-9	4,400	swabbing
Union Oil Co., No. 33 Chapman Richfield, Orange Co.	30- 3-9	4,442	cmtd. 4,351
Union Oil Co., No. 35 Chapman Richfield, Orange Co.	30- 3-9	3,621	sd. sh. drlg.
Calif. Eastern Oil Co., No. 1 Placentia, Orange Co.	31- 3-9	4,786	fish. D.P.
Melbourne Pet. Co., Well No. 1, San Bernardino Co.	12- 3-8	2,238	pump. 140 b.d.
Equitable Pet. Co., No. 1 Wildcat, San Bernardino Co.	11-10-5	2,618	hd. sd. drlg.

KANSAS

Week Ending September 26 (Descriptions are East unless marked otherwise)

Barber County

Sinclair Prairie Oil Co. No. 1 Gentry, NE cor. sec. 1-33-15w. Cd. 4,795-4,813 ft. and 4,813-23 ft., T.D.

Barton County

Armer & Vernon O. & G. Co. No. 1 Ainsworth, NE NE SE sec. 33-16-13w. M.I.M.

F. E. Bailey et al No. 1 Hammeke, NE NE SW sec. 12-18-12w. Set 20-in. pipe 40 ft.; S.D. 315 ft.

Freehorn et al No. 1 Sooy, NW NW NE sec. 27-18-12w. Cellar.

Missouri Valley Oil & Gas Co. No. 1 Peach, SE cor. sec. 24-16-14w. M.I.M.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. Set 5-in. csg. 3,200 ft.; Sil. 3,326-30 ft. Est. 4 B.O.P.H.

Yarnell & Carlson No. 1 Roth, NE cor. sec. 35-18-12w. Drlg. 1,850 ft.

Butler County

Hutchinson Oil & Gas Co. et al No. 1-A Westfall, SE SW SE sec. 13-27-3. R.U. machine.

Simpson Oil Co. No. 1 Dahlem, SW cor. sec. 11-26-6. R.U.

Chase County

Tropp et al No. 1 Fromm, SE cor. sec. 29-18-9e. 10-in. csg. 2,118 ft.; C.O.

Clark County

Olson & Watchorn No. 1 Morrison. C SE SW sec. 17-32-21w. Drlg. 5,670 ft. with rotary. D.S.T. 5,430 ft.; S.S.O.&G.&W.

Decatur County

Winkler & Koch No. 1 Vessey, C NW SE sec. 26-3-26w. R.U.R.

Edwards County

Skelly Oil Co. et al No. 1 Kipp, C SE SE NE sec. 27-25-14w. Cellar.

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Fsg. 4,570 ft.; will skid rig.

Ellis County

Bradley Oil Co. et al No. 1 Penney-Wann, SE cor. sec. 13-15-20w. Set 5-in. csg. 3,681 ft.; sand 3,653-57 ft.; 600 ft. O.I.H. in 30 min.

Bridgeport Mch. Co. No. 1 Ubert, NE NE NW sec. 12-13-18w. Sil. 3,598 ft. Pay 3,630-37 ft.; 650 ft. O.I.H. Set 5-in. at 3,605 ft.

Jas. Brouk et al No. 1 Jacoba, NW NW SE sec. 31-15-16w. Drlg. 100 ft.

Empire O. & R. Co. No. 1 Samuelson, NE NE SE sec. 31-11-16w. 6-in. csg. 3,367 ft. Drlg. 3,430 ft.

Champlin Refining Co. No. 1 Hadley, SE SW NE sec. 30-11-17w. Cmtd. 9⅝-in. 3,367 ft.; R.U.S.T.

Glick & Morrow No. 1 Staah, SW SW SE sec. 6-13-17w. Drlg. 2,655 ft.

Frank Hamilton et al No. 1 Sack, NW NW SE sec. 26-13-19w. 8-in. 1,218 ft.; Topeka 3,174 ft.; Oswald 3,450 ft.; S.O. 3,543-50 ft.; set. 5-in. 3,564 ft.

Hoard Exploration Co.
Seismograph Surveys
623 Esperson Bldg.
Houston - - Texas

Jones & Shelbourne No. 1 Gunther, SE SE SW sec. 9-11-19w. S.D. 3,577 ft.

Kansas Dev. Corp. No. 1 Haller, SE SE NW sec. 10-11-18w. Anhydrite 1,190 ft.; Topeka 2,915 ft. (cor.); T.D. 3,050 ft.; acidized; potential prod. 531 bbls. oil in 24 hrs.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-12-18w. Andy. 1,410 ft.; U.R. 12-in. at 1,418 ft.

Lario O. & G. Co. et al No. 1 Cress, NE cor. sec. 13-11-17w. S.D. 346 ft.

Lario O. & G. Co. No. 1 Marshall, NW SE NE sec. 36-11-18w. Anhy. 1,347 ft.; drlg. 1,546 ft.

Murphy Oil Co. No. 1 Wiesner, SE SE SW sec. 12-14-19w. R.U.

Simar Oil Co. et al No. 1 Leiker, NW NW SE sec. 12-15-18w. Drlg. 2,980 ft.

Taylor et al No. 1 Emery, NE NE NE sec. 23-14-18w. Drlg. 532 ft.

Vickers Pet. Co. No. 1 Kraus, SW SW NW sec. 22-14-19w. Anhy. 1,390 ft.; Oswald 3,420 ft.; Siliceous 3,735 ft.; sand 3,737-40 ft., T.D.; Pot. 259 bbls. Comp.

Winkler & Koch No. 1 Jensen, SW SW NE sec. 3-13-18w. Rig.

Ralph Wixson et al No. 1 Gorham Estate, NW NW SW sec. 35-15-16w. Drlg. 2,270 ft.

Wolf Creek Oil Co. et al No. 1 Polifka, SW SW NE sec. 24-13-18w. Set 10-in. 2,718 ft.; drlg. 3,193 ft.

Ellsworth County

Empire O. & R. Co. No. 1 Kunkle, SE SW SE sec. 16-15-8w. Sil. 3,019-35 ft.; D.&A.

Finney County

Helmerich & Payne No. 1 Jones, C SE sec. 34-26-24w. T.D. 2,764 ft.; 3,250,000 ft.; gas; comp.

Graham County

Sam Murphy and J. S. Alcorn No. 1 Wamhoff, C NW sec. 27-10-22w. R.U.R.

Noah & Young No. 1 Hills, NW SE SE sec. 19-10-21w. Anhydrite 1,770 ft.; drlg. 1,960 ft.

Grant County

Columbian Fuel Co. No. 1 Gray, C SE sec. 3-29-35w. Set 8-in. csg. 2,500 ft.; 3,000,000 ft. gas, 2,808 ft., T.D.; shot.

Greenwood County

Guy Scott et al No. 1 Pedroja, SE NE SE sec. 6-26-10. Peru sd. 1,675-1,720 ft.; S.O.; fsg. 2,130 ft.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. Set 10-in. csg. 3,062 ft.; T.D. 3,110 ft.; S.D.; S.O. and G.

Kearney County

J. L. Murphy No. 1 Campbell, NW NW SW sec. 32-25-35w. M.I.M.

Kingman County

W. C. McBride, Inc., No. 2-A Wooldridge, SW NE SE sec. 16-27-7w. Chat 3,860 ft.; 2,000 ft. fluid in hole at 3,894 ft. Est. one-third oil.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 3-27-8w. O.W.D.D.; drlg. 4,583 ft.

Lincoln County

Graham et al No. 1 Smiley, NE NW NW sec. 26-10-9w. R.U.R.

Marion County

Empire Oil & Ref. Co. No. 1 Schmidt, NW NW SE sec. 31-20-2. Viola 3,078 ft.; 2,600 ft. W.I.H. at 3,122 ft.; T.D. 3,186 ft.

Western Kansas Oil & Refining Co. et al No. 1 Hauser, SW cor. sec. 19-19-4. M.I.M.

McPherson County

Hawkins et al No. 1 Ritikofer, NE NE SE sec. 2-20-1w. Base Miss. L. 3,140 ft.; Sil. 3,474-3,505 ft; D.&A.

Ness County

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Drlg. 1,292 ft.

Sayre Oil Co. et al No. 1 Ryersee, C NE SE sec. 34-18-21w. Drlg. 3,260 ft.

Pawnee County

Simpson Oil Co. et al No. 1 Gates, SW cor. sec. 13-20-16w. Siliceous 3,815 ft.; cmtd. 7-in. csg. 3,819 ft.; T.D. 3,841 ft.; acidized with 2,500 gals.; Pot. 257 bbls. Comp.

Pratt County

H. V. Elwell et al No. 1 Fay, NW NW SE sec. 15-27-14w. Drlg. 3,815 ft.

Indian Territory Illum. Oil Co. and Olson Drlg. Co. No. 1 Bolt, C NW NE sec. 5-29-11w. Drlg. 3,890 ft.

Reno County

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. Set 5-in. lnr. 3,385 ft.; Chat 3,424 ft. (corrected); S.D. 3,540 ft.

Graham et al No. 1 Miller, NE NE SE sec. 36-25-10w. Siliceous 4,333-62 ft.; T.D. showing sulfur wtr.; cut 7-in. csg. at 2,000 ft.; D.&A.

Maxwell Oil & Gas Co. No. 1 Clayton, SE SE NW sec. 23-25-7w. Loc.

Page et al No. 1 Mueller, C S½ SW NE sec. 25-24-5w. Drlg. 3,595 ft.

Fred Phillips No. 1 Bay, SW SW SW sec. 7-23-8w. Chat 3,703 ft.; cored 3,705-08 ft.; S.S.G.&S.D.O.

Pryor & Lockhart et al No. 1 Kerr, C NW sec. 23-23-8w. K.C. L. 3,150 ft.; drlg. 3,300 ft.

Fred Rust No. 1 Schumacher, SE SE SW sec. 29-22-8w. Viola 3,918-20 ft.; to core.

Rice County

Allison & Fitzwilliam et al No. 1 Feby, NW SW NW sec. 17-19-7w. 12-in. csg. 1,111 ft.; drlg. 2,015 ft.

Buckley No. 1 Bailey, SW SW NW sec. 19-20-6w. Rig.

Charles Petroleum Corp. No. 1 Speck, NW NW SE sec. 29-20-8w. Drlg. 545 ft.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7. 8-in. csg. 2,875 ft.; K.C. 2,898 ft.; U.R. 8-in. 3,185 ft.

Shell Pet. Corp. No. 1 Gordon, C W half W half NE sec. 21-21-10w. Siliceous 3,435 ft.; cg.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Siliceous 3,235-38 ft. 36,500,000 ft. of gas at 3,260 ft.; acidized; no gas; T.A.

John Stark et al No. 1 Doran, NE NE SE sec. 13-19-10w. 6-in. csg. 3,265 ft.; drlg. 3,267 ft.

W. E. Witt et al No. 1 Wright, NW NW SE sec. 26-19-9w. R.U.

Rooks County

Buckner & Schoff No. 1 McConnel, NE cor. sec. 34-6s-18w. M.I.M.

Empire Oil & Ref. Co. No. 1 Ham, SW NW NW sec. 24-8-19w. Rig.

L. C. D. Drlg. Co. et al No. 1 Westhusin, C NE SE sec. 11-9-17w. 8-in. 2,416 ft.; drlg. 2,685 ft.

Lester & Dean No. 1 Methens, SE SE NE sec. 29-10-20w. Topeka 3,250 ft.; fsg. 3,366 ft.

J. A. Shoemake No. 1 Stebbins, NE NE SW sec. 26-7-17w. T.D. 3,591 ft.; P.B. to 2,977 ft.; acidized; swbd. 100 bbls. oil and swabbed down; P.B. to 2,630 ft. C.O.

Rush County

C. L. Sheedy No. 1 Bison, SW cor. sec. 35-16-17w. Set 15-in. csg. 455 ft.; fsg. 855 ft.

Russell County

Arner et al No. 1 Maier, NE NW NE sec. 20-15-14w. Set 6-in. csg. 3,040 ft.; Sil. 3,295-96 ft. T.D.; H.F.W. 3,317 ft.

Braden & McClure No. 1 Herbel, NE NE NW sec. 35-14-14w. Gorham sd. 3,165-68 ft.; set 5-in. 3,164 ft.; Pot. 220 bbls. oil.

Coraiena Oil Co. No. 1 L. A. Sellens, NW cor. sec. 17-15-13w. Topeka L. 2,620 ft.; 200 ft O.I.H. 2,790-2,800 ft.; 8-in. csg. 2,735 ft.

El Dorado Ref. Co. No. 1 Scott, NW NW NE sec. 17-13-13w. S.D. 835 ft.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w. Tarkio L. 2,515 ft.; T.D. 2,550 ft.; swabbed 5 B.P.H. and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

Winkler & Koch No. 1 McAllister, NE NE SE sec. 9-12-13w. Anhy. 811 ft.; drlg. 2,200 ft.

Saline County

Brouk et al No. 1 Othelander, NE NW SE sec. 10-16-3w. R.U.

Ryan Consolidated Co. & Archer No. 1 Norton, NE cor. sec. 32-14-2w. Set 8-in. 2,917 ft.; T.D. 3,415 ft.; set 6-in. csg.; acidized. P. 300 bbls. water in 10 hrs.; S.O.

Sedgwick County

D. R. Lauck No. 1 McLean, SW SW SE sec. 1-27-1w. Siliceous 3,613 ft.; wtr. 3,755-68 ft.; fsg. 4,125 ft.

R. J. Wallace et al No. 1 Scheer, SW cor. sec. 22-27-3w. S.O. 3,145 ft.; base K.C. L. 3,265 ft.; fsg. 3,315 ft.

Smith County

Helmerich & Payne No. 1 Meyer, NE NE SW sec. 10-5-11w. Rotary rig.

Stafford County

Indian Terr. Illum. Oil Co. and Empire O. & R. Co. No. 1 Mellies, C N½ N½ NE sec. 6-22-11w. U.R. 8-in. csg. 3,000 ft.

Skelly Oil Co. et al No. 1 Kipp, SE SW NE sec. 27-25-14w. 8-in. 3,691 ft.; R.U.S.T.

C. E. Skiles No. 1 Leidigh, NW NW SW sec. 21-22-11w. Anhy. 563 ft. 12-in. csg., 567 ft.

Sumner County

S. J. Buffington No. 1 Payne, C SW NE sec. 10-35-2e. Drlg. 1,365 ft.

Empire O. & R. Co. No. 1 Hoffman, NW NW SW sec. 27-34-1e. M.I.M.

D. L. Husted et al No. 1 Evers, SE SE NE sec. 27-31-2. S.D. 220 ft.

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. Big L. 3,712 ft.; Simpson 3,753 ft.; S.D. 3,780 ft.

Pryor & Lockhart No. 1 McCowen, NE NE SW sec. 18-32-1w. Wilcox 4,151 ft.; drlg. 4,152 ft.

Rose Spring Drlg. Co. et al No. 1-A Rutter, C NW NW sec. 21-33-2e. Spudded

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. Drlg. 4,027 ft.

Trego County

Central Commercial No. 1 Wagg, NW NW SE sec. 17-13-21w. K.C. L. 3,548 ft.; granite 4,562-63 ft.; T.D.; P.B. 3,864 ft.; P. 8 bbls. oil and 2 bbls. water; comp.

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-13-24w. Set 6-in. csg. 4,409 ft.; Miss. 4,410 ft.; H.F.W. 4,470-80 ft.; fsg. 4,500 ft.

R. B. McNeely et al No. 1 Lemke, NW NW SW sec. 7-11-22w. T.D. 3,671 ft.; will run 5-in. csg.

G. M. Piggott, Inc. et al No. 1 Burkett, C SW sec. 15-11-22w. Set 8-in. csg. 3,460 ft.; 4 bbls. water, 3,552-60 ft. S.D. 3,596 ft.

York State Oil Corp. No. 1 Gugler, SW cor. sec. 36-12-21w. T.D. 3,421 ft.; S.O. & W.; to R.U.S.T.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.

Holmes et al No. 1 Holmes, SE NE NE sec. 25-25-14e. Drlg. 615 ft.

Ladd et al No. 1 Lauber, NW cor. sec. 4-25-14e. Drlg. 835 ft.

C. L. Sheedy et al No. 1 Fuhlhage, NE NW SW sec. 27-25-14. Set 6-in. csg. 1,431 ft.

OKLAHOMA

Week Ending September 26

NORTHERN OKLAHOMA

Beckham County

Mid-American Oil Co. No. 1 Biscoe, SW SW SW sec. 28-8-22w. Drlg. 875 ft.

Caddo County

Wasteka Oil Co. No. 1 Griffin, SW SE NE sec. 27-6-10w. T.D. 6,570 ft.; S.D. to run csg.

Cleveland County

Hall-Briscoe, Inc., No. 1 Fant, SW SW NE sec. 27-10-2w. S.D. at 7,511 ft.

H. R. Hollenbeck No. 1 Stinson, NW NW NE sec. 17-9-2w. Rig.

Coal County

Carter Oil Co. et al No. 1 Warne, NE NE NW sec. 31-3-9. Drlg. 1,600 ft.

Continental Oil Co. No. 1 Breedlove, NW SW SW sec. 24-1-8. Coring, 2,496-2,510 ft. shale.

Continental) Oil Co. No. 1 King, NE SW NE sec. 26-1-8. Coring, 4,112-22 ft.

Continental Oil Co. No. 1 W. Kirby, SW SE SW sec. 23-1-8. 9-in. 1,455 ft.; drlg. 1,525 ft.

H. W. Lee et al No. 1 Harton, C NE NE NE sec. 9-6-13w. T.D. 2,001 ft.; S.D.

M. C. Mitchell No. 1 Quiett, NE NW SW sec. 35-1-8. Wapanucka 1,550 ft.; T.D. 1,900 ft.; shot collapsed 38 ft. of pipe; tools stuck 1,551 ft.; swedged out.

Sinclair Prairie Oil Co. No. 1 Culver, NE NE SW sec. 16-1-8. Drlg. 5,250 ft.

Garfield County

Herndon Drlg. Co. et al, No. 1 Branson, NW SW SE sec. 23-24-3w. Drlg. 4,780 ft.

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2-3w. M.I.M.

S. F. Lundy No. 1 Prince, NE NE SE sec. 21-1-2w. T.D. 2,552 ft.; S.D.

A. Luttrell et al No. 1 Howell, NW SE NW sec. 34-1-1. T.D. 160 ft.; S.D.

Ohio Oil Co. No. 1 Smythe, NE NE SW sec. 23-22-4w. (Wilcox sd. test); moving in rotary; cd. oily sds. and sh. 3,532-58 ft.

Garvin County

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2n-3w. R.U.R.

Tide Water Oil Co. et al No. 1 Sturtevant, NE NE NW sec. 28-4-1e. Drlg. 2,970 ft.

Grady County

John Graham et al No. 1 Castleberry SW SE NW sec. 8-5-7w. Sd. 1,900-06 ft.; showing oil and gas; bailed dry; T.D. 1,909 ft.; S.D.

Ray Stevens No. 1 Mays, NE cor. sec. 1-3-8w. Drlg. 5,400 ft.

Tide Water Oil Co. No. 1 Sturtevant, NE cor. NW sec. 28-4-1e. Loc.

Hughes County

McAdams & Barnes No. 1 Koch, SW NE NE sec. 1-9-10. T.D. 3,835 ft.; P.B. to 2,600 ft.

McAdams & Barnes No. 1 Long, SE NE NW sec. 29-9-9. Drlg. 3,130 ft.

Sinclair Prairie Oil Co. et al No. 1 Wilkly, SW cor. sec. 23-9-8. Calvin 1,505 ft.; Cromwell 3,508 ft.; T.D. 3,549 ft.

Sivalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. T.D. 3,498 ft.; C.O.

Southern Oil Co. No. 1 Buck, C NW SW SW sec. 21-8-10. R.U.S.T.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 18-27-4. Sd. 2,186-2,320 ft.; drlg. 2,744 ft.

Denver Prod. & Ref. Co. No. 1 School, SE NW NE sec. 13-26-1w. Wilcox 4,123 ft.; T.D. 4,141 ft.; P.B. to test Oswego.

Max Kelley No. 1 Johns, NW NW NW sec. 35-27-4. Drlg. 405 ft.

Robert Wilson et al No. 1 Dickerson, NE NE SW sec. 20-29-1w. Stalnaker sand 2,550-2,620 ft.; 1,000 ft. water; drlg. at 2,935 ft.

Kiowa County

Argus Pet. Co. No. 1 Osbourne, NW cor. NE sec. 9-7-16w. T.D. 795 ft.; U.R. 6-in. csg.

R. O. Houlbelt No. 1 Pfenning, SE NW SE sec. 35-7-17w. Machine.

Lykins et al No. 1-A Aetna Life, SE cor. sec 8-5-16w. T.D. 530 ft.; fsg.

Pendleton & Vaughn No. 2 R. E. Hobb, C E½ NW SW sec. 7-6-16w. T.D. 425 ft.; W.O.C.; est. 2-bbl. pumper.

Pendleton & Vaughn No. 3 Smart, SE NW SE sec. 12-6-17w. Drlg. 350 ft.

Rush C. Roberts No. 1 Funkhouser, SE cor. NW NW sec. 25-7-17w. Drlg. 125 ft.

Travis & Scott No. 1 Doyle, NE SE SW sec. 21-5-17w. T.D. 937 ft.; S.D.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3-22. Pull 10-in. csg.; T.D. 1,900 ft.; set 10-in. csg.; S.D. for wtr.

Lincoln County

Skelly Oil Co. No. 1 Sporn, NW NE SW sec. 21-17-3. T.D. 4,550 ft.; R.U.S.T.

Logan County

Helmerich & Payne et al No. 1 Hasler, NW NW SE sec. 14-16-4w. R.U.R.

McIntosh County

Stanolind Oil & Gas Co. et al No. 1 Tiger, NW NW SW sec. 13-9-15. R.U.R.

Murray County

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2-3w. Moving in tools.

Hornsby & Jones No. 1 Sadler, NE NE NW sec. 20-1n-2e. T.D. 2,674 ft.; W.O.C.

Power Oil Co. No. 1, C SW NE sec. 10-1s-2e. Set. 10-in. csg. 252 ft.; drlg. 1,630 ft.

Osage County

Chavalier & Simon No. 1 Osage, SE cor. sec. 24-23-9. R.U. and S.D. for wtr.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. T.D. 2,904 ft.; drill pipe in hole; cmtd. crevice with 300 sacks; drlg. cement.

Pontotoc County

H. H. Diamond No. 1 fee, SE cor. sec. 30-6-8. Cellar and pits.

Pottawatomie County

Carter Oil Co. No. 1 Warne, NE NE NW sec. 31-3-9. Digging cellar.

J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,590 ft.

Seminole County

Amerada Pet. Co. No. 1 Yarhola, NE NW NW sec. 36-10-7. Rig.

Feimlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

H. E. Kennedy No. 1 Bowlegs, NW NW SE sec. 3-8-7. Loc.

Texas County

Allison & Barnhill No. 1 Bingley, SE SE NE sec. 30-2n-18. (Cimmaron Meridian) U.R. 8-in. csg., T.D. 1,025 ft.

SOUTHERN OKLAHOMA

Atoka County

A. J. Sanders No. 3 Redden, SE SW SW sec. 19-1n-5e. Drlg. 570 ft.

Carter County

Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. T.D. 8,625 ft.; lost circulation.

W. E. Hammond No. 1 J. Lile, SW cor. SE SE sec. 8-5s-1e. T.D. 570 ft.; 10-in. csg. 544 ft. Machine moved out.

Texas Co. et al No. 1-B Cathey, SE NE NE sec. 6-5s-1w. O.W.D.D.; sd. 4,354-55 ft.; swbd. 330 bbls. in 15 hrs; T.D. 4,559 ft.; P.B. to 4,410 ft. Acidized; pumped 160 bbls. in 24 hrs.; testing.

Cotton County

English Drlg. Co. No. 1 Wilson, NW NW SE sec. 7-4s-7w. Tools moved out; T.D. 1,514 ft.

Phillips Pet. Co. No. 1 Warren, C NE NE SE sec. 1-5s-13w. T.D. 1,657 ft.; recementing csg., 1,568 ft.

Harmon County

Lloalko Trust, Ltd., No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. T.D. 2,870 ft.; C.O. 2,600 ft.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. T.D. 2,368 ft.; tools moved out.

A. H. Jackson No. 1 fee, SE cor. SW SW SW sec. 27-1s-24w. T.D. 3,001 ft.; abd.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w. Moving in machine; T.D. 2,212 ft.

Mid-Continental Oil Co. No. 1 Reid, C SW NW sec. 32-6s-4w. Moving in tools.

Pearson et al No. 1 Douthitt, NE cor. sec. 24-6s-9w. Drlg. 3,615 ft.

Twin State Oil Co. No. 1 Brown & Majors, SW SE NW sec. 21-5s-6w. Loc.

Johnston County

Equitable O. & G. Co. No. 1 Bellsey, NE SW sec. 12-2s-4e. Arbuckle L. 1,552 ft.; drlg. 1,938 ft. in L.

Love County

Amerada Pet. Corp. No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft.; P.B. 2,970 ft.; perforated csg. at 1,539-99 ft. and 2,095-2,115 ft.; cmtd. perf.; flwd. 22 bbls. in 24 hrs. and "went dead"; S.D.O. Aug. 4.

W. H. Riddle et al No. 1 Johnson, C SW SE cor. sec. 20-8s-2w. T.D. 4,009 ft.; tools moved out.

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; P.B. to 8,133 ft.; to cut 5-in. csg.

Marshall County

Helmrich & Payne No. 1 Taliaferro, NW

SE SW sec. 26-6s-5e. Drlg. 5,538 ft., in shale.

Stephens County

Coline Oil Co. No. 1 Johnson, SW SE NE sec. 1-2n-8w. M.I.M.

W. G. Endicott et al No. 1 McFatridge, NW NW SW sec. 11-3s-9w. T.D. 1,515 ft S.D.

T. H. McCasland et al No. 1 Hildebrand SW SE NE sec. 1-3s-7w. Arbuckle 4,360 ft.; T.D. 4,601 ft.; S.D.O.

Ed Parson No. 1 Olson, C SW SW sec. 21-2-8w. Drlg. 300 ft.

Tillman County

Beal & Toler No. 1 Magill, SE SE SE sec. 18-1n-16w. T.D. 250 ft.; S.D. for csg.

Rochelle Bernheimer No. 1 Tate, NE NE NW sec. 16-1s-19w. T.D. 3,001 ft.; S.D for orders.

Johnson, Young & Mitchell No. 1 Donahoe, SW NW NW sec. 7-4s-17w. T.D. 3,200 ft.; S.D.; contract depth.

Lynn Oliver No. 1 Rilling, SE SE NW sec. 22-1s-15w. Granite Wash 775 ft T.D. 1,000 ft.; S.D.O.

D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-15w. T D. 2,425 ft.; S.D.

ARKANSAS

Bradley County

Phillips Pet. No. 1 M. Bird, N half NW NE sec. 28-16-12. R.U.

Calhoun County

I. P. B. Oil Corp. No. 1 Henisberger, SW SW SE sec. 9-11-13. Cmt. 10-in. 109 ft. W.O.C.S.

Clark County

John G. Wooten No. 1 Z. T. Sparkman, sec. 1-11-20. S.D. 20 ft.

Cleveland County

A. B. Diffie No. 1 L. C. Ross, 330 ft. S and W, NE cor. SW NE sec. 11-11-11 12-in. cmtd. 101 ft.; W.O.C.S.

R. L. Saxon No. 1 Tipton, SE cor. SW NE sec. 13-11-12. R.U.

Columbia County

Buford & Co. No. 1 Kendrick, 330 ft. S and E. NW cor. SE¼ sec. 7-19-18. Drlg. 3,318 ft.

Dallas County

Walter Lown No. 1 G. Atkinson, NE NW SE sec. 7-10-13. 12-in. cmt. 76 ft.; W. O.C.S.

A. P. Tarver No. 1 Wilbon, sec. 21-9-13. Drlg. 3,050 ft.

Hempstead County

Easton et al No. 2 Conway-Tiller, 330 ft. N and E, SW cor. SW sec. 34-12-27 Drlg. 2,710 ft.

Imperial Oil & Gas Prod. Co. No. 1 Foster Est., sec. 35-12-26. Drlg. 2,000 ft.

Lewis Hays No. 2 State of Ark. (Red River bed), SE cor. sec. 18-14-25. R.U.

Spooner et al No. 2 Lafferty, sec. 17-14-24 Tstg.; running 4-in. csg. T.D. 2,451 ft.

Stewart Oil Co. No. 1 fee, sec. 31-12-23. Set 10-in. at 70 ft.

Lafayette County

A. M. Neeley No. 1 Meek, 330 ft. S and W, NE cor. NE NW sec. 35-19-25. R.U.

Little River County

M. E. Sanderson No. 1 Punning, sec. 6-13-20. 10-in. cmtd. 168 ft.; W.O.C.S.

Joe Strahan No. 1 Dierks, SW SE sec. 21-12-28. Loc.

Lonoke County

Frank F. Silver No. 1 Joe Chambers, sec. 17-2-7. Cmt. 7-in. 1,394 ft.; W.O.C.S.

Miller County

Duluth-Ark. Oil Co. No. 2 Beck, sec. 12-2-36. T.D. 2,940 ft. Dry and abnd.

Erwin & Leach No. 1 Red River Farms, sec. 2-17-26. 10-in. set; cmt. 447 ft.; W.O.C.S.

C. V. Lenz No. 7 Dale, O.W.D.D., sec. 24-15-26. Drlg. 3,310 ft.

McClanahan et al No. 1 Miller Ld. & Lbr. Co., SW cor. sec. 2-18s-28w. Cg. 5,880 ft.

Odell Hinson No. 1 Montana Realty Co., 330 ft. S and W NE NW sec. 3-17-28. Cg. 5,011 ft.

Nevada County

Benedum & Trees No. 1 Groves, C N half SE NW sec. 10-14-20. D.S.T. 9 jts. S.W.; 3 hvy. oil and 31,000,000 ft. gas; 10-in. cmt. 1,310 ft.

Steel & Warmack No. 1 Wm. Haynil, SE SE NW sec. 6-14-21. S.D. 20 ft.

Ouachita County

Phillips Pet. Co. No. 1 Arnold, 660 ft. S and 330 ft. E, NW cor. NE sec. 27-15-15. Comp.; flw. 70 bbls. oil, 15 bbls. S.W., and 2,000,000 ft. gas; ½-in. tbg. ck.; T.D. 4,944 ft.

Union County

Penn-Ark. Corp. No. 1 W. N. Rauiston 330 ft. S and E. NW NW SE sec. 12-17-14. T.D. 1,146 ft.; S.D. on matl.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Rodessa

Ambrose No. 1 Johnson, 50 ft. E, 12 ft. N, SW cor. tr. in street N of Blk. 5. Loc.

American Lib. Oil Co. No. 3 Norton, NE cor. sec. 17-23-15. Drlg. 3,226 ft.

Ark.-La. Gas Co. No. 2 Teamer, NW SE SW sec. 13-23-16. Hole straight; S.D.; W.O.; T.D. 6,067 ft.

Blackwell O. & G. No. 1 Wynn, 330 ft. N, 396 ft. E, SW SE NE sec. 8-23-15. Comp.; flw. 12 B.P.H.; ¼-in. tbg. ck.; T.D. 6,095 ft.

Blackwell O. & G. Co. No. 2 Wynn, sec. 8-23-15. Drlg.

J. G. Collins No. 2 Caddo School Bd., sec. 8-23-15. R.U.

David L. Harlin No. 1 W. D. Norton, NW cor. sec. 22-23-15. Loc.

Ideasa Oil Co. No. 1 D. K. Sumner, NW SW SE sec. 10-23-15. Drlg. 4,301 ft.

J. Edward Jones No. 1 Rockefellow, Lot 3, Blk. 21, sec. 33-23-16. 13-in.; 7-in. cmt. 5,880 ft.; T.D. 6,055 ft.

J. Edward Jones No. 1 M. Z. Sharp, 1,227 ft. N, 330 ft. E, SW cor. SE¼ sec. 4-23-16. Drlg.

Lion Oil Ref. Co. No. 4 Ratcliff, NW cor. sec. 16-23-15. Loc.

Lion Oil Ref. Co. No. 3 Wynn, SW cor. sec. 9-23-15. Drlg. 3,244 ft.

Lion Oil Ref. Co. No. 4 Wynn, 330 ft. N, 990 ft. E, SW cor. sec. 9-23-15. Drlg. 2,200 ft.

Louisian Oil Ref. Co. No. 2 Ratcliff, NW cor. sec. 16-23-15. Drlg. 5,411 ft.

Louisiana Oil Ref. Co. No. 3 Ratcliff, NW cor. sec. 16-23-15. Drlg. 4,718 ft.

Magnolia No. 8-A Caddo Lv. Bd., NW SW NE sec. 21-23-16. Drlg. 4,900 ft.

Magnolia No. 6 Tyson, NE cor. sec. 13-23-16. Drlg. 5,801 ft.

McAlester Fuel Co. No. 1 W. M. Mitchell, SW cor. sec. 20-23-16. Drlg. 4,858 ft.

McAlester Fuel Co. No. 2 N. S. Tyson, C sec. 22-23-16. 7-in. 5,990 ft.; cmt. 7-in. 5,967 ft.

Magnolia No. 9-A Caddo Levee Bd., SW SE NW sec. 21-23-16. Drlg. 1,534 ft.

Magnolia No. 3 N. S. Spearman, 1,013 ft. S, 704 ft. E, NW cor. SW sec. 18-23-15. Drlg. 6,065 ft.

Phillips Pet. Co. No. 4 Adams, 330 ft. N and W, SE NE NW sec. 17-23-15. Comp.; flw. 22 B.P.H.; 11/32-in. tbg. ck.; T.D. 6,060 ft.

Phillips No. 1 Rose McDonald, NW SW NE sec. 17-23-16. Drlg. 5,580 ft.

Phillips Pet. Co. No. 7 Norton, NE SE NW sec. 17-23-15. Drlg. 3,247 ft.

Phillips No. 1 Wilbanks, NE SW SW sec. 8-23-15. Drlg. 5,761 ft.

Phillips No. 2 Cora Woods, 330 ft. N and E, SW cor. N½ NE sec. 17-23-15. 7-in. cmt. 6,053 ft.; T.D. 6,082 ft.; W.O.C.S.

Phillips No. 3 Cora Woods, 330 ft. N and E, SW cor. NE NE sec. 17-23-15. T.D. 6,047 ft.; tstg.

Phillips Pet. Co. No. 4 Cora Woods, SE NW NE sec. 17-23-15. 16-in. set 257 ft.; W.O.C.S.

Red Iron Drlg. Co. No. 1 Means, 330 ft. N and E, C sec. 9-23-15. Cg. 5,933 ft.

Reinke et al No. 1 Fitts, 363 ft. S, 1,308 ft. E, NW cor. SW NW sec. 23-23-16. Comp.; flw. 12 B.P.H.; ¼-in. tbg. ck.; T.D. 6,001 ft.

Snowden & Anding No. 2 Taylor, Lot 7, Blk. 46, sec. 23-23-16. Drlg. 5,960 ft.

United Gas No. 7 Brewer Unit, SW cor. sec. 22-23-16. Drlg. 5,107 ft.

United Gas No. 8 Brewer Unit, 83 ft. N. 588 ft. W, C sec. 22-23-16. Loc.

United Gas No. 2 fee 574, SW SE sec. 16-23-16. 7-in. cmt. 5,772 ft.; T.D. 5,995 ft.

United Gas No. 3 fee 574, NE SE sec. 16-23-16. Drlg. 4,548 ft.

United No. 2 Gibson, NE SE NW sec. 15-23-16. 7-in. 5,950 ft.; T.D. 5,993 ft.

United Gas No. 2 L. Gibson est., sec. 15-23-16. 7-in. set 5,968 ft.; T.D. 5,980 ft.

United Gas No. 3 L. Gibson est., sec. 15-23-16. 7-in. cmt. 5,961 ft.; T.D. 5,987 ft.

United Gas No. 10 M. L. Pitts, SE SW SW sec. 13-23-16. 7-in. cmt. 6,057 ft.; T.D. 6,097 ft.

United Gas No. 24 Rodessa Oil & Ld. Co., SE NW SE sec. 17-23-16. Loc.

United Gas No. 25 Rodessa Oil & Ld. Co., NE NW NE sec. 22-23-16. Loc.

United Gas No. 3 W. B. Spearman, SW cor. sec. 15-23-16. 7-in. cmt. 5,970 ft.; T.D. 5,988 ft.

United Gas No. 4 W. B. Spearman, NE SW sec. 22-23-16. Fsg. 5,985 ft.

United Gas No. 5 N. S. Spearman Unit, SW cor. sec. 7-23-15. Comp.; flw. 37 B. P.H.; ⅝-in. tbg. ck.; T.D. 6,077 ft.

United Gas No. 6 N. S. Spearman, 600 ft. S, 650 ft. E, NW cor. sec. 18-23-15. Drlg. 2,088 ft.

United Gas No. 7 N. S. Spearman, SW cor. sec. 7-23-15. R.U.

United Gas No. 4 J. L. Young, NE cor. sec. 28-23-16. 7-in. cmt. 5,941 ft.; T.D. 5,950 ft.

R. J. Wolfe No. 1 R. G. Fitts, 330 ft. N line, 132 ft. E line, SW cor. SE NE sec. 8-23-15. Cg. 5,939 ft.

N. LOUISIANA WILDCATS

Bienville Parish

W. V. Bowles et al No. 1 Bank of Ringgold, sec. 3-15-9. Drlg. 4,717 ft.

DeSoto O. & G. Co. No. 1 Dunn and Olsen, C N½ NW¼ sec. 15-16-10. Drlg. 750 ft.

J. W. Leonard No. 1 Courtney, 330 ft. N and W, SE cor. sec. 5-17-7w. Drlg. 7,025 ft.

Rondeau et al No. 1 Locke, NE cor. sec. 19-15-10. R.U.

Bossier Parish

Ark-La Gas Co. No. 1 J. G. McDade, NW cor. sec. 8-17-11. R.U.

Geo. H. Bringhurst et al No. 2 Buckley, 1,000 ft. N, 330 ft. W, SE cor. sec. 35-21-13. Cg. 2,052 ft.; (cor.).

Premier Inv. Co. No. 29 Wyche, NW cor. sec. 14-19-11. T.D. 426 ft.; pmpd. 10 B. P.D.

Premier Inv. Co. No. 30 Wyche, NE cor. sec. 14-19-11. Drlg. 100 ft.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Hole clean; S.D.; T.D. 2,954 ft.

Triangle Drlg. Co. No. 1-E Skannal, 660 ft. N and 2,640 ft. W, SE cor. sec. 28-17-12. Comp.; gauged 4,000,000 ft. gas; T.D. 5,350 ft.; old T.D. 5,696 ft.

United Gas No. 1 Roos, NW cor. sec. 23-17-12. Drlg. 2,640 ft.

United Gas No. 1-F H. L. Skannal, 660 ft. S, 2,640 ft. W, NE cor. sec. 26-17-12. Cg. 4,438 ft.

Caddo Parish

Bayou State No. 2 S. Jolly, NW NE SW sec. 22-22-15. T.D. 1,001 ft.; W.O.C.S.

Calatex O. & G. Co. No. 2 Scott, 1,038 ft. W, 807 ft. N, SE cor. sec. 5-16-16. P.B. to 2,460 ft.; W.O.C.S.

Calatex O. & G. Co. No. 1 Whitworth, 770 ft. S, 860 ft. E, NW cor. SW¼ sec. 10-16-16. T.D. 2,954 ft., S.W. and abd.

W. D. Chew No. 1 Spell, SW cor. SE SW sec. 29-21-15. Drlg. 2,122 ft.

Flake & Henry No. 1 Rogers, SW NW SW sec. 11-20-15. Drlg.

Gulf Ref. Co. No. 1 E. P. Hatcher, 660 ft. N and E, SW cor. SE¼ sec. 11-17-15. Drlg. 5,460 ft.

J. B. Hutchinson No. 2 Storey-Phillips, SW cor. NE NW sec. 28-16-13. Taking D.S.T. 1,408 ft.

Innerstate Drlg. Co. No. 1 E. Smith, SW SE SW sec. 35-21-15. Acidized; testing; T.D. 1,628 ft.

Juan et al No. 1 P. Hobbs, SE cor. NW NW sec. 28-21-15. Acid; T.D. 1,672 ft.; tstg.

Maja Oil Co. No. 1 Mathew, NE SE sec. 10-20-15. T.D. 2,204 ft.; tstg.

Morefield & Prine No. 2 Stokeley, sec. 5-20-16. T.D. 951 ft.; flw. 30 B.P.D.

Morefield & Prine No. 3 Stokeley, sec. 5-20-16. Drk.

Prairie River Synd. No. 1 Hutchinson, 330 ft. N and E, SW NW sec. 15-15-12. Cg. 6,468 ft.

Simplex No. 5 Natalie, SE W½ SE sec. 10-20-15. R.U.

Sport Oil Corp. No. 1-D Muslow, SE cor. sec. 5-20-15. D.S.T. 4,820 ft.; S.W.; W.O.

Stanolind O. & G. No. 108, NE NE sec. 14-21-15. Comp.; pmp. 25 B.P.D.; T.D. 1,680 ft.

Stanolind O. & G. Co. No. 109, NE cor. sec. 14-21-15. 7-in. cmt. 1,483 ft.; W.O. C.S.

Stanolind O. & G. Co. No. 110, NE cor. 14-21-15. Drk.

Stanolind O. & G. Co. No. 111, NE cor. sec. 14-21-15. Loc.

Stewart-Williams No. 1 Connell, NE sec. 10-20-15. Drk.

Stewart-Williams No. 3 Iron, SW NE 10-20-15. T.D. 1,600 ft.; S.D.; repairs.

Caldwell Parish

Crickett & Woods No. 1 fee, NW SE NE sec. 18-11-3. Drlg. 1,355 ft.

Claiborne Parish

E. T. Oakes No. 1 H. W. Patton, NE cor. sec. 1-20-5. S.D.; W.O. 4,987 ft.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. T.D. 8,616 ft., fshg. for D.P.

United Gas No. 1 A. P. Taylor, SE cor. sec. 5-19-5. 13-in. cmt. 300 ft.; W.O.C.S.

De Soto Parish

J. E. Carlson No. 1 A. P. Garland, 250 ft. S and E, NW cor. SW sec. 7-14-14. S.D. 2,150 ft.

Fife et al No. 1 Ramsey, sec. 36-11-11. W.O.D.S. 1,425 ft.

R. Kamon No. 1 Roscoe, SE NW sec. 14-12-13. Drlg. 300 ft.

W. C. Nabors No. 1 fee, C NE¼ sec. 8-12-13. S.D. 1,217 ft.

R. C. Payne No. 1 Harris, sec. 11-13-14. Drlg. by junk 2,200 ft.

T. W. Simmons No. 1 Johns, 330 ft. N, 990 ft. W cen. sec. 20-14-16. Drk.

Franklin Parish

S. C. Jensen No. 1 Dailey, sec. 12-11-6. Drlg. 2,090 ft.

Grant Parish

Theo Davis No. 1 Maxwell, SW SE sec. 9-9-1. T.D. 1,442 ft.; S.D.

Grant Oil Co. No. 1 Swope, SW N½ NE SW sec. 17-9-1e. R.U.

Al Johnson No. 1 Brewster, 150 ft. S and W, NE NW NE sec. 18-9-1e. T.D. 1,646 ft.; D.&A.

Pet. Prod. Co. No. 1 Buffington, SE NE sec. 18-9-1. Drlg. 575 ft.

Perry et al No. 1 Barrett, 150 ft. N and W, SE NE SE sec. 17-9-1e. 6-in. cmt. 1,583 ft.; W.O.C.S.

Rogers Oil Co. No. 1 Swope, SW NW SW sec. 17-9-1. Comp.; pmp. 75 B.P.D.; T.D. 1,604 ft.

Rogers Oil No. 2 Swope, SW NW SW sec. 17-9-1e. R.U.

Theo Davis et al No. 1 Barrett, NE cor. S½ SW NE sec. 19-9-1e. T.D. 1,710 ft.; D.&A.

La Salle Parish

Adams La. Corp. No. 1 Goodpines Lbr. Co., sec. 12-6-2e. T.D. 2,690 ft.; D.&A.

H. L. Hunt No. 8 Urania, NE SW NW sec. 25-10-1. T.D. 1,542 ft.; W.O.S.R.

Urania Oil & Gas No. 1 Urania, NW cor. sec. 7-10-2. S.D. 300 ft.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. T.D. 3,760 ft.; S.D.; wtg. on D.S.T.

So. Carbon Co. No. 17 Tensas, NE cor. sec. 4-20-4. Loc.

Farrell & Jones No. 1 Harp, SW cor. sec. 12-22-7. Will not drill; loc. abd.

United Carbon Co. No. 5 Stovall, NE SE sec. 4-20-4. Comp.; 5,000,000 ft. gas; T.D. 2,165 ft.

United Gas No. 42 Crossett, SE cor. sec. 25-22-4e. 8-in. cmt. 2,159 ft.; W.O.C.S.

United Gas Co. No. 43 Crossett, SW cor. sec. 30-22-5e. Comp.; gas 9,000,000 ft.; T.D. 2,245 ft.

United Gas Co. No. 44 Crossett, SE cor. sec. 24-22-5e. Comp.; gas 15,500,000 ft.; T.D. 2,241 ft.

United Gas No. 45 Crossett, NW cor. sec. 31-22-5e. Comp.; gas 14,000,000 ft.; T.D. 2,230 ft.

United Carbon Co. No. 6 Stovall, SE cor. sec. 28-21-4. R.U.

United Carbon Co. No. 7 Stovall, NW cor. sec. 27-21-4. R.U.

Natchitoches Parish

Ivan A. Allen No. 1 Simpson, sec. 12-7n-7w. R.U.

C. D. Morrison No. 1 Moffitt, 250 ft. N, 250 ft. W, SE cor. sec. 19-10-10. 10-in. set 110 ft.; W.O.C.S.

Union Pet. Co. No. 2 DeBlieux, 2,395 ft. E, 150 ft. S of W cor. sec. 33-10-7w. T.D. 3,354 ft.; S.D. for wtr.

Red River Parish

Byrd Exp. Co. No. 1 Edge, SW NE sec. 29-13-11. Hole clean; T.D. 2,499 ft.; W. O.S.R.

Richland Parish

Gulf Ref. Co. No. 15 R. R. Rhymes et al, sec. 32-17-6e. Drlg. 6,916 ft.

J. S. Morrisey No. 1 Jones, 1,293 ft. N. 636 ft. E, SW cor. sec. 15-18-7e. S.D. 3,252 ft., contract depth.

Sabine Parish

Arcadia Ref. No. 1 Henderson, NE SE SE sec. 30-9-13. Drlg. 550 ft.

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. W.O.S.R.

F. G. Cox No. 1 Whitney Corp., C NW NE sec. 8-9-13. Blwg. wild; trying cap; T.D. 5,503 ft.

Ellis Prod. Co. No. 1 Small, SE NW SE sec. 24-7-11. 6-in. cmt. 2,682 ft.; W.O. C.S.

E. G. Cravath No. 1 Delaney, sec. 31-9-13. T.D. 2,152 ft.; W.O.S.R.

J. R. Keen No. 1 Long Bell, 276 ft. N and 238 ft. W, SE cor. NE SW sec. 5-18-13. Acidized; W.O.S.R.

Porey Sisters Oil Co. No. 3 Burkett, NE cor. sec. 10-9-13. Cg. L. 3,030 ft.

A. H. Tarver No. 2 Baker, NW cor. NE sec. 36-8-12. D.S. test, 1,000,000 ft. gas; T.D. 5,200 ft. S.D. for water.

J. J. Watson No. 2 Reneau, NE SE SW sec. 29-9-13. Drlg. 1,350 ft.

Union Parish

Federal Pet. Co. No. 1 fee, 330 ft. S and W, NE cor. sec. 34-21-3e. Shot D.S. and recovered 2,550 ft.; 9-in. parted; cmt.; will drill out and fish; T.D. 7,021 ft.

Innerstate Natl. Gas Co. No. 55, SE cor. sec. 5-20-4. 6-in. cmt. 2,150 ft.; W.O.C.S.

Innerstate Natl. Gas Co. No. 53 fee, SE cor. sec. 31-21-4. R.U.

Innerstate Natl. Gas Co. No. 50 fee, SE cor. sec. 29-21-4. 6-in. cmt. 2,069 ft.; W. O.C.S.

Innerstate Natl. Gas Co. No. 52 fee, SE cor. sec. 32-21-4e. Comp.; 19,000,000 ft. gas; T.D. 2,142 ft.

Innerstate Natl. Gas Co. No. 54 fee, SE cor. sec. 32-21-4. Comp.; 6,500,000 ft. gas; T.D. 2,142 ft.

So. Carbon Co. No. 69 fee, 660 ft. S and E, NW cor. sec. 9-21-4e. 6-in. cmt. 2,144 ft.; W.O.C.S.

So. Carbon Co. No. 12 Grayling, NE cor. sec. 29-21-4e.

So. Carbon Co. No. 13 Grayling, SE cor. sec. 5-21-4e. Loc.

So. Carbon Co. No. 14 Grayling, SE cor. sec. 5-21-4e. Loc.

So. Carbon Co. No. 15 Grayling, SW cor. sec. 4-21-4e. Loc.

Webster Parish

W. D. Ambrose No. 1 T. Crichton, 330 ft. N and E, SW cor. SW NW sec. 36-18-9. F.B. to 5,806 ft.; and perf.; tstg.

Magnolia Pet. Co. No. 5 J. Cox, SW SE sec. 23-21-10. R.U.

R. W. Norton No. 2 Josey & Masey, C W½ NE NW sec. 27-21-10. Clearing loc.

Red Hawk Oil Co. No. 1 Mayfield, sec. 9-23-9. 10-in. set 90 ft.; W.O.C.S.
Ohio Oil Co. No. 1 R. M. Coyle, NE SE sec. 22-21-10. Drlg. 1,302 ft.
Ohio Oil Co. No. 1 Bodcaw Lbr. Co., C NE SE sec. 28-21-10. Drlg. 3,410 ft.
L. R. Skidmore No. 1 Barnett, sec. 29-17-9. S.D. for wtr. 1,026 ft.
United Gas No. 2 Davis, 660 ft. S and E, NW cor. sec. 23-21-10. Loc.
United Gas No. 1 Mixon, SE SW sec. 22-21-10. Drlg. 2,711 ft.
Woodley Pet. Co. No. 2-A L. C. Cox. SW NE sec. 22-21-10. Drlg.
Woodley Pet. Co. No. 2-B L. C. Cox. cen. SW SW sec. 23-21-10. Drlg.
Woodley Pet. Co. No. 4-B Gray, cen. NE NE sec. 27-21-10. Drlg. 1,760 ft.

SOUTH LOUISIANA FIELDS

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 35 Watkins, sec. 8-12s-12w. T.D. 93 ft.; W.O.C.

Caillou Island—Terrebonne Parish

Texas Co. No. 39 State, sec. 17-23s-20e. T.D. 4,145 ft.; P.B. 3,100 ft.

Charenton—St. Mary Parish

Mike Hogg No. 1 State, sec. 5-13s-9e. Drlg.

Dog Lake—Terrebonne Parish

Texas Co. No. 19 State, sec. 5-22s-16e. Drlg. sd. and L. 6,591 ft.

Cameron Meadows—Cameron Parish

Burton Sutton No. 14 School Land, sec. 16-14s-13w. Drlg. sd. and shells 1,900 ft.
Humble-Magnolia No. 17 Cameron Meadows, sec. 21-14s-13w. Abd. 5,395 ft.
Magnolia-Humble No. 18 Cameron Meadows, sec. 21-14s-13w. Drlg.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-10s-2e. Drlg.
Humble O. & R. Co. No. 13 Humble Community, sec. 33-10s-2e. T.D. 4,423 ft.; P.B. and sdtkg.; drlg. sdy. sh. 4,734 ft.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. Drlg. wtr. sd. 5,749 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 7 State, sec. 14-21s-6e. Drlg. 7,100 ft.
Union Sulphur Co. No. 2 Cole, sec. 12-9s-8w. 6⅝-in. csg. 5,254 ft.; T.D. 5,257 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 12 Castle, sec. 13-9s-8w. Drlg. sh. 7047 ft.
Fohs Oil Co. No. 13 Castle, sec. 14-9s-8w. Drlg. sh. 6547 ft.
Fohs Oil Co. No. 14 Castle sec. 13-9s-8w. Drk.
Fohs Oil Co. No. 15 Castle, sec. 13-9s-8w. Drk.
Union Sulphur Co. No. 8 Barbe, sec. 11-9s-8w. T.D. 8,671 ft.; P.B. 6,850 ft F.B. 6,409 ft.; making squeeze job.
Union Sulphur Co. No. 2 Bel, sec. 12-9s-8w. Drlg. sh. and L. 5,488 ft.
Union Sulphur Co. No. 2 Kaufman, sec. 13-9s-8w. T.D. 6,773 ft.; P.B. 6,325 ft. drlg. sh. 7,118 ft.
Union Sulphur Co. No. 10 Powell, sec. 29-7s-2w. Drk.
Union Sulphur Co. No. 13 State, sec. 12-9s-8w. Drk.
Union Sulphur Co. No. 15 State, sec. 12-9s-8w. Drk.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 21 Irwin, sec. 12-12s-10w. Drlg. sh. 8,140 ft.
Stanolind O. & G. Co. No. 5 Carter-Severing, sec. 22-12s-10w. Drk.
Stanolind O. & G. Co. No. 24-B Gulf Ld., sec. 14-13s-10w. Drlg. sd. and sh. 2,634 ft.
Stanolind O. & G. Co. No. 2 Portie, sec. 23-12s-10w. Drlg. sh. 6,018 ft.
Stanolind O. & G. Co. No. 7-A School Ld., sec. 16-12s-10w. R.U.
Texas Co. No. 21 State, sec. 12-12s-10w. Drk.
Texas Co. No. 19-B State, sec. 13-12s-9w. T.D. 6,683 ft; P.B. 4,700 ft. to sdtrk.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 5 Banta, sec. 40-13s-9e. T.D. 6,687 ft.; 7-in. csg. 6,687 ft.; perf. 6,627-72 ft.; I.P. 172 bbls. in 12 hrs.; 3/16-in. ck.
Herton Oil Co. No. 1 Barrileau, sec. 59-13s-8e. T.D. 8,258 ft.; P.B. 8,035 ft.; sdtkd.; drld. to 8,850 ft.; will run 5-in. csg. to 7,350 ft. and sdtk.
Herton Oil Co. No. 2 Carter, sec. 38-13s-9e. Drk.

Jennings—Acadia Parish

Lake City Oil Co. No. 1 Jennings-Haywood, sec. 46-9s-2w. 6⅝-in. csg. 1,786 ft.; W.O.C.
Stanolind O. & G. Co. No. 16 Houssiere-Latrielle, sec. 47-9s-2w. T.D. 7,222 ft.; 7-in. csg. 7,128 ft.; W.O.C.
Stanolind O. & G. Co. No. 17 Houssiere-Latrielle, sec. 47-9s-2w. Drlg. sh. 6,980 ft.
Superior Oil Prod. Co. No. 1 Leckett, sec 42-9s-2w. T.D. 6,380 ft.; 7-in. csg. 6,342 ft.; W.O.C.

Lafitte—Jefferson Parish

Texas Co. No. 5 Lafitte, sec. 20-17s-24e. Cg. sdy. sh. 10,612 ft.
Texas Co. No. 5 Rigolettes, sec. 29-17s-24e. Cg. sh. 10,219 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State. T.D. 7,948 ft.; cutting and pulling stuck drill pipe.
Texas Co. No. 38 State, sec. 38-21s-19e. Top salt 1,355 ft.; base salt 3,710 ft.; T.D. 3,777 ft.; surveying hole; no report.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 6, LaFourche, sec. 11-8s-25e. Drk.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-18e. Cg. sdy. sh. showing oil 5,594 ft.; no report.

Leesville—LaFourche Parish

Gulf Oil Corp. No. 11 Allen Land. Top salt 5,639 ft.; T.D. 5,659 ft.; P.B. T.D. 3,877 ft.; pulling liner to retest.
Lincoln Oil Co. No. 8 State, sec. 34-21s-22e. T.D. 4,962 ft.; 7-in. csg. 4,898 ft.; tstg.
Texas Co. No. 51 Leesville, sec. 34-21s-22e. Drk.
Texas Co. No. 52 Leesville, sec. 34-21s-22e. Drk.
Texas Co. No. 52 Leesville, sec. 37-21s-22e. Drk.
Texas Co. No. 56 Leesville, 10¾-in. csg. 741 ft.; T.D. 4,969 ft.; rng. 7⅝-in. csg.; I.P. 2,275 B.P.D. through ¼-in. ck.

New Iberia—Iberia Parish

Crysanthon et al No. 1 Gulf fee, sec. 71-12s-7e. T.D. 7,336 ft.; P.B. 6,800 ft.; 7-in. csg. 6,829 ft.; making squeeze job.
H. Fostiades No. 3 Gulf Ld., sec. 25-12s-7e. Drk.
H. Fostiades No. 3 Schwing, sec. 25-12s-7e. Drk.
Wm. Hollis No. 4 Boliver, sec. 56-12s-7e. Drlg. sh. and sd. 4,896 ft.
Wm. Hollis No. 2-A Bullock-Burke, sec. 25-12s-7e. 7-in. csg. 3,950 ft.; W.O.C.
Wm. Hellis No 2 Schwing, sec. 56-12s-7e. T.D. 6,400 ft.; P.B. 3,990 ft.; W.O.C.
Texas Co. No. 1 Clementine, sec. 25-12s-7e. Drlg. S.W. sd. 6,030 ft.
Texas Co. No. 1 Granite, sec. 25-12s-7e. T.D. 4,478 ft.; 7-in. csg. 4,445 ft.; W.O.C.
Texas Co. No. 3-B Hanzen, sec. 54-12s-7e. Drk.
Texas Co. No. 1 Schwing. 10-in. csg. 1,341 ft.; T.D. 6,732 ft.; tstg.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 5 Devilbiss, sec. 14-9s-42. Drlg. sh. and L. 8,012 ft.

Port Barre—St. Landry Parish

Gulf Oil Corp. No. 14 Wilson Cochran, sec. 4-6s-5e. T.D. 3,889 ft.; P.B. 3,350 ft.; W.O.C.
Pan American Prod. Co. No. 2 Garland, sec. 4-6s-5e Drk.
Pan American Prod. Co. No. 1 Haskins Garland. T.D. 3,339 ft.; P.B. 3,327 ft.; W.O.C.
H. J. Weir No. 2 Thompson, sec. 20-6s-5e. Cd. sd. 3,804-16 ft.; prep. to make D.S.T.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 57-11s-6e. 13⅜-in. csg. 1,387 ft.; T.D. 6,707 ft., pulled drill pipe in two 90 ft. off bottom; hole cleaned; drlg. sh. 7,000 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 782 fee, sec. 29-9s-10w. Drlg. sh. and L. 3,793 ft.
Union Sulphur Co. No. 833 fee, sec. 29-9s-10w. T.D. 3,738 ft.; I.P. 720 B.P.D.; 20/64-in. ck.

Tepetate—Acadia Parish

Continental Oil Co. No. 6-A Homeseekers Dev. Co., sec. 29-7s-2w. T.D. 8,314 ft. I.P. 216 bbls. in 21 hrs. through 5/32-in. ck.; T.P. 2,550 lbs.
Continental Oil Co. No. 7-A Homeseekers. sec. 29-7s-2w. T.D. 1,497 ft.; rng. 10¾-in. csg.
Continental Oil Co. No. 2 P. W. Miller. sec. 28-7s-2w. Drlg. sh. and shells 6,548 ft.
Continental Oil Co. No. 1 Ortego, sec. 29-7s-2w. Cg. sd. 8,318 ft.
Continental Oil Co. No. 1 Stoddard, sec. 29-7s-2w. Drk.
Continental Oil Co. No. 5-A Welch. sec 28-7s-2w. T.D. 8,307 ft.; I.P. 202 B.P.D.
Continental Oil Co. No. 6-A Welch, sec. 28-7s-2w. Drlg. sh. 2,714 ft.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. S.D. 4,746 ft.; (corrected)

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. Drlg. sh. 2,450 ft.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; W.O.C.

Avoyelles Parish

Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

Buhler Oil Co. No. 2 Faiszt, sec. 26-8s-10w. Old T.D. 4,412 ft.; S.D. 3,755 ft.
General Crude Oil Co. No. 1 George P Buhler, sec. 30-8s-9w. Drlg. sh. 6,308 ft.

Cameron Parish

Magnolia Pet. Co. No. 1, Johnson Bayou sec. 16-15s-14w. Drlg. sd. and sh. 3,360 ft.
Magnolia Pet. Co. No. 1 Raymond Lebau, sec. 13-12s-9w. Drk.
Pure Oil Co. No. 1, Mallard Bay, sec. 22-13s-3w. 18⅝-in. csg. 1,499 ft.; drlg. sh. 1,576 ft.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 46 8s-2e.T.D. 5,655 ft.; washing over D.S.
Cavalier Oil Co. No. 1 Young, sec. 62-4s-2w. Drk.

East Feliciana Parish

East Feliciana Oil No. 1 West & Budding sec. 37-1s-1w. Spudded 15 ft. and S.D

Iberia Parish

Jefferson Lake Oil Co. No. 409 Lake Pigneur, Twp. 12s-3e. Drlg. sh. 5,910 ft.
Texas Co. No. 1-B State, Vermillion Bay sec. 16-15s-6e. Drlg. sdy. sh. 8,262 ft.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. R.U.

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Joe Sturdivant, sec. 25-10s-4w. 10¾-in. csg. 2,616 ft. drlg. sdy. L. 7,613 ft.
Stanolind O. & G. Co. No. 1 C. E. Britt sec. 15-10s-3w. 9⅝-in. csg. 8,842 ft.; drlg. sh. 9,884 ft.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

Plaquemines Parish

Tide Water Oil Co. No. 1 Manhattan Fruit Co. O.W.D.D.; T.D. 3,532 ft.; P.B. and S.T.; cd. salt 2,965-85 ft.

St. Bernard Parish

John Cartwright No. 1 Meraux Nunez. sec. 19-13s-12e. Sd. 6,212 ft.; no report.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, sec. 5-12s-5e. T.D. 7,522 ft.; top salt 7,493 ft.; P.B. 3,316 ft.; S.D.

St. Landry Parish

Stanley Thompson No. 1 Lewis, sec. 29-5s-6e. Drk.

St. Martin Parish

Texas Co. No. 2 State, sec. 14-10s-9e. Drlg. S.W. sd. 8,804 ft.
Texas Co. No. 1 Bayou Sale, sec. 23-17s-9e. Drlg. sh. 2,443 ft.

St. Mary Parish

Texas Co. No. 1, Horse Shoe Bayou, sec. 40-17s-9e. Drlg. sh. 2,443 ft.

Terrebonne Parish

J. B. Beck et al No. 1 Realty Operators, sec. 103-17s-17e. T.D. 2,216 ft.; P.B. 1,420 ft.; 7-in. csg. 1,420 ft.; perf. 1,368-72 ft.; comp. for gas well.
Humble O. & R. Co. No. 1 H. J. Ellender, sec. 23-19s-19e. Cmtd. 20-in. csg. 260 ft.

Vermilion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. T.D. 11,732 ft.; circulating with mud; well tried to blow out; fsg. for stuck D.S.
Delcambre & Shelton No. 1 Delcambre, sec. 63-12s-6e. S.D. 2,708 ft.
Del-Shell Exploration Co. No. 1 Landry hrs., sec. 1-13s-4w. S.D. 2,000 ft.
Louisiana Land & Expl. Co. No. 1 La. Fur Co., sec. 16-15-1e Bldg. foundations.
Stanolind O. & G. Co. No. 1 Fred Stovall. Drk.

TEXAS

Week Ending September 26

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 7 Austin College, Wm. Harvey Sur. 10¾-in. csg. 1,101 ft.; drlg. sh. 1,910 ft.
Humble O. & R. Co. No. 6-B Hardy, J. E. Grace Sur. T.D. 3,960 ft.; tested 60 ft. of oil and sd. on D.S.T. 3,314-30 ft.

Hastings—Brazoria County

Humble O. & R. Co. No. 2 Brown, W. H. Snyder Sur. 10¾-in. csg. 1,890 ft.; cg. sh. 5,782 ft.
Stanolind O. & G. Co. No. 1 Floyd Brown, H.T.&B. Sur. No. 29. Drk.
Stanolind O. & G. Co. No. 1 Margaret Kidd, B. T. Masterson Sur. Loc.
Stanolind O. & G. Co. No. 4-B Brown, H.T.&B. Sur. No. 29. Cg. sd. 5,688 ft.
Stanolind O. & G. Co. No. 2 Curketh, H. T.&B. Sur. No. 35. T.D. 6,128 ft.; 7-in. csg. 6,081 ft.; flowed 28 bbls. in 6 hrs., 12/64-in. ck.; T.P. 180 lbs.; C.P. 750 lbs.
Stanolind O. & G. Co. No. 3 Drodgemeyer, H.T.&B. Sur. No. 36. Drk.
Stanolind O. & G. Co. No. 1 Edwards, Wm. Henry Sur. 10¾-in. csg. 1,861 ft.; T.D. 1,864 ft.; drlg. sh. and L. 5,004 ft.

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ATLAS
ATLAS DROP FORGE CO.
LANSING, MICHIGAN

Stanolind O. & G. Co. No. 4 Ford, A.C.H. &B. Sur. No. 1, 10¾-in. csg. 1,836 ft.; T.D. 1,838 ft.

Stanolind O. & G. Co. No. 5 Ford, A.C.H.& B. Sur. No. 1. Loc.

Stanolind O. & G. Co. No. 6 Ford, A.C.H.& B. Sur. No. 1. Loc.

Stanolind O. & G. Co. No. 1 Surface, B.B. B.&C. Sur. Drk.

Stanolind O. & G. Co. No. 1 Scott, H.T. &B. Sur. No. 29, 10¾-in. csg. 1,876 ft.; cg. sd. 5,334 ft.

Stanolind O. & G. Co. No. 1 Turner, A.C. H.&B. Sur. No. 1. Drk.

Stanolind O. & G. Co. No. 7 Williams, A.C. H.&B. Sur. No. 1. Loc.

Lockridge—Brazoria County

Gulf Oil Co. No. 2-A Wilkes and Smith, J. Robinson Sur. Drlg. sh. 2,703 ft.

Manvel—Brazoria County

Bowles & Borsodi No. 4 Norvell Co., Inc., H.T.&B. Sur. No. 23, R.U. and S.D.

Texas Co. No. 23 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91; 10-in. csg. 1,130 ft.; drlg. sh. 4,193 ft.

Texas Co. No. 3 Lemmer, T. Spraggins Sur. 10-in. csg. 1,130 ft.; drlg. sd. and L. 3,585 ft.

West Columbia—Brazoria

Sterling O. & G. Co. No. 1 J. A. Phillips, Geo. Kennilee Sur. Drk.

Texas Co. No. 14 Abrams, George Tenille League Sur. T.D. 3,061 ft.; P.B. 3,191 ft.; sdtrk. 2,840-55 ft.; T.D.

Heyser—Calhoun County

Humble O. & R. Co. No. 4-A Welder, J. M. Rios Sur. T.D. 5,470 ft.; 7-in. csg. on bottom.

Humble O. & R. Co. No. 3-B Welder, A. Sisneros Sur. T.D. 5,500 ft.; rng. 7-in. csg.

Humble O. & R. Co. No. 4-B Welder, A. Sisneros Sur. Drk.

Portilla Oil Co. No. 1 Welder, A. Sisneros Sur. Drlg. sh. and L. 3,460 ft.

Anahuac—Chambers County

Gulf Oil Corp. No. 4 Knowles, sec. 48, H. &T.C. Sur. 7-in. csg. 7,081 ft.; T.D. 7,175 ft. sd.

Gulf Oil Corp. No. 5 Knowles, sec. 48, H. &T.C. Sur. Drk.

Humble O. & R. Co. No. 7 Braussard and Hebert, sec. 58, H.&T.C. Sur. T.D. 7,085 ft.; I.P. 30 B.P.H. through ¼-in. choke.

Humble O. & R. Co. No. 23 Meddleton, sec. 58, H.&T.C. Sur. 10¾-in. csg. 1,574 ft.; W.O.C.

Humble O. & R. Co.'s No. 4 Engels, sec. 50, H.&T.C. Sur. T.D. 7,085 ft.; 5½-in. csg. 7,040 ft.; I.P. 29 B.P.H. through ¼-in. ck.; T.P. 1,140 lbs.

Humble O. & R. Co. No. 11 Meddleton, sec. 58, H.&T.C. Sur. T.D. 7,082 ft.; 5½-in. csg. 7,040 ft.; I.P. 25 B.P.D. through ¼-in. ck.

Humble O. & R. Co. No. 13 Tyrell, sec. 52, H.&T.C. Sur. T.D. 7,100 ft.; 5½-in. csg. 7,079 ft.; W.O.C.

Humble O. & R. Co. No. 13 White, J. McGahey Sur. T.D. 7,081 ft.; 7-in. csg. 7,048 ft.; I.P. 28 B.P.H., ¼-in. ck.

Humble O. & R. Co. No. 5-B White, J. McGahey Sur. T.D. 7,224 ft. P.B. 7,045 ft.; 5½-in. csg. 6,979 ft.; drld. plug 7,224 ft.; P.B. 7,047 ft.; swbd. S.W.; plugged back.

Humble O. & R. Co. No. 3 Wilcox, sec. 58, H.&T.C. Sur. 9⅝-in. csg. 1,503 ft.; drlg. sh. 1,700 ft.

Sun Oil Co. No. 22 White, J. McGahey Sur. T.D. 487 ft.; W.O.C.

Sun Oil Co. No. 21 White, James McGahey Sur. T.D. 7,117 ft.; 7-in. csg. 7,088 ft.; I.P. 657 B.P.D., ¾-in. ck.

Cotton Lake—Chambers County

Humble O. & R. Co. No. 1, Howard Winfree Sur. Loc.

Humble O. & R. Co. No. 2 Howard, Winfree Sur. Loc.

Glenn H. McCarthy No. B Kilgore, J. Townsend Sur. 10¾-in. csg. at 1,180 ft.; cg. sh. 6,282 ft.

Humble O. & R. Co. No. 1 Dutton, Kate Dugat Sur. 10¾-in. csg. 1,624 ft.; drlg. sh. 5,855 ft.

Turtle Bay—Chambers County

Sun Oil Co. No. 1 C. J. Chambers, M. A. Carroll Sur. 16-in. csg. 1,197 ft.; drlg. sh. 4,612 ft.

Big Creek—Fort Bend County

Gulf Oil Co. No. 71 Davis, M. Young Sur. R.U.

Jenal Oil Co. No. 3 Byron, M. Young Sur. Drlg. sh. 2,315 ft.

H. L. Patton No. 1 Bryan, M. Young Sur. T.D. 1,717 ft.; S.D.

Thompson Drlg. Co. No. 1 W. C. Moore, B. Wickerson Sur. T.D. 300 ft.; W.O.C.; S.D.

Blue Ridge—Fort Bend County

Barnett Pet. Co. No. 1-B Blakely, Lot 7, Blk. E, Drew Sur. Drlg. gumbo 2,603 ft.

Ben G. Barnett No. 1-C Blakely, E. Drew Sur. Top salt 2,666 ft.; T.D. 2,667 ft.; swbd. S.W.; S.D.

H. H. Hoffman No. 1 Lee, J. Poitevent Sur. T.D. 4,014 ft.; 7-in. csg. 3,890 ft.; set screen and liner; testing.

Texas Gulf Prod. Co. No. 1-B Blakely, Lot No. 7, E. Drew Sur. T.D. 3,887 ft.; P.B. to 2,250 ft.; drlg. sh. and sd. 3,-860 ft.

Boling—Fort Bend County

Mack Hank Oil Co. No. 2-C Farmer, J. Scott Sur. Drlg. sh. and L. 3,400 ft.

H. K. Spear et al No. 1 Kasperek, Simon Miller Sur. T.D. 3,983 ft.; 7-in. csg. 3,-960 ft.; showed gas on D.S.T. 3,900-40 ft.

Orchard—Fort Bend County

Gulf Oil Corp. No. 7-H Moore, Burnap Sur. Drk.

Gulf Oil Corp. No. 46 Moore, Leo Burknapp Sur. S.D. 6,836 ft.

Gulf Oil Corp. No. 48 Moore, J. Frazier Sur. Drlg. L. rock 2,390 ft.

Gulf Oil Corp. No. 6-A Moore, J. Frazier Sur. Abd. 2,458 ft.

Thompson-Fort Bend County

Robert Elkel No. 1 J. W. Hempel, S. Kennedy Sur. Drlg. sdy. sh. 3,820 ft.

Sterling O. & R. Co. No. 2 Booth, H. Christmas Sur. S.D. 830 ft.

High Island—Galveston County

Stanolind O. & G. Co. No. 9-B Cade, M. Dunman Sur. R.U.

Stanolind O. & G. Co. No. 58 Cade, N. Fitzsimmons Sur. Drlg. sh. 3,864 ft.

Starolind O. & G. Co. No. 59-A M. Fitzsimmons Sur. R.U.

Dickinson—Galveston County

Humble O. & R. Co. No. 1 Mealy. Drlg. sdy. sh. 8,930 ft.

Humble O. & R. Co. No. 10-A Stewart, W. K. Wilson Sur. Cg. sh. 8,468 ft.

Kenben Oil Co. No. 2 Stewart, W. K. Wilson Sur. T.D. 8,691 ft.; P.B. 8,515 ft.; perf. csg. 8,497-8,515 ft.; I.P. 118 B.P.D. through ¼-in. ck.; W.P. 1,450 lbs.

Keneo Oil Co. No. 2 Broughton, N offset to No. 1. Drlg. sh. 3,811 ft.

Pan American Prod. Co. No. 1 Louise Craig, W. K. Wilson Sur. Cmtd. 410 ft. of liner; T.D. 8,300 ft.; W.O.C.

Smith and MacDannald No. 1 Shelar, J. O. Jones Sur. Drk.

Stanolind O. & G. Co. No. 6 State River Bed, 13⅜-in. csg. 2,119 ft.; drlg. sh. 7,939 ft.

Greens Lake—Galveston County

Sun Oil Co. No. 3 J. D. Hughes, Wm. C. Baker Sur. Drlg. in sdtrkd. hole 5,997 ft.

Sun Oil Co. No. 4 Hughes, W. C. M. Baker Sur. Drk.

Arriola—Hardin County

Republic-Houston Oil Co. No. 14 fee, E. Arriola Sur. 13⅜-in. csg. 835 ft.; T.D. 3,285 ft.; 9⅝-in. csg. 3,270 ft.; fishing for tubing.

Republic Prod. Co. No. 15 fee, E. Arriola Sur. Spudded.

Republic Prod. Co. No. 16 fee, E. Arriola Sur. Drlg. sh. 3,612 ft.

Batson—Harding County

Deering et al No. 5 Hooks, Donoho Sur. Drk.

Deering et al No. 4 W. W. Cruse, F. H. Green Sur. Spd.

Sour Lake—Hardin County

Kirby Pet. Co. et al No. 1, Stephen Jackson Sur. A-34. R.U.

Fairbanks—Harris County

Amerada-Stanolind No. 1 Carpenter, Francis Fry Sur. 16-in. csg. 54 ft.; 10¾-in. csg. 1,014 ft.; T.D. 6,862 ft. (cor.); 7-in. csg. 6,858 ft.; perf. csg. 6,831-34 ft.; flowed 299 bbls. of fluid, 60 per cent oil in 14 hrs.; T.P. 1,850 lbs.; C.P. 2,150 lbs.

Mykawa—Harris County

Flanagan Oil Co. No. 1 M. J. Cowherd, Lot 260, Wm. Lovett Sur. T.D. 3,850 ft.; no report.

West Prod. Co. No. 10 W. H. Irwin, W. B. Walker Sur. Drk.

West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. T.D. 5,943 ft.; P.B. 5,430 ft.; sdtrk. 5,131 ft.; drlg. 6,685 ft.

Pierce Junction—Harris County

Rio Bravo Oil Co. No. 11 fee, B.B.B.&C. Sur. T.D. 1,078 ft., 10¾-in. csg. 1,070 ft.; drlg. sh. 2,839 ft.

South Houston—Harris County

Stanolind O. & G. Co. No. 1, District No. 11. Derrick.

Stanolind O. & G. Co. No. 5 First National Bank, Callahan and Vince Sur. Drk.

Stanolind O. & G. Co. No. 1 Holland and Price, Tr. No. 26, H.T.&B. Sur. No. 26, T.D. 4,775 ft.; 7-in. csg. 4,621 ft.; I.P. 454 B.P.D., ¼-in. ck.

Stanolind O. & G. Co. No. 2 Holland and Price, Tr. 26, H.T.&B. Sur. 16-in. csg. 89 ft.; T.D. 4,815 ft.; 7⅝-in. csg. 4,-692 ft.; flowed 76 bbls. in 14 hrs.; C.P. 75 lbs.

Stanolind O. & G. Co. No. 3 Holland and Price, H.T.&B. Sur. No. 6. Drk.

Stanolind O. & G. Co. No. 1 McKinney, H.T.&B. Sur. No. 6. Drk.

Stanolind O. & G. Co. No. 3 Schwartz, Tr. No. 24. T.D. 4,015 ft.; I.P. 442 B.P.D. through ¼-in. ck.

Stanolind O. & G. Co. No. 4 Schwartz, H.T.&B. Sur. No. 6. T.D. 4,000 ft.; 5½-in. csg. 3,963 ft.

Stanolind O. & G. Co. No. 2 Wydelta, Tr. 25, H.T.&B. Sur. T.D. 3,960 ft.; 5-in. csg. 3,921 ft.; flowed 58.72 bbls. in 8½ hrs. through ¼-in. ck.

Tomball—Harris County

Humble O. & R. Co. No. 1 Ayres, J. Pruitt Sur. T.D. 5,569 ft.; I.P. 8 B.P.H., ¼-in. choke.

Humble O. & R. Co. No. 4 Hoffman, J. House Sur. T.D. 5,559 ft.; 7-in. csg. 5,-584 ft.

Humble O. & R. Co. No. 3 Holderwith, C. N. Pillott Sur. T.D. 5,557 ft.; I.P. 19 B.P.H. through ¼-in. ck.; T.P. 700 lbs.; C.P. 1,050 lbs.

Humble O. & R. Co. No. 6 Milo, C. N. Pillott Sur. 10¾-in. csg. 955 ft.; T.D. 960 ft.; W.O.C.

Shell Pet. Corp. No. 1 Key. Drlg. sh. and L. 4,680 ft.

Texas Co. No. 1 S. T. Daughtre, I.&G.N. Sur. T.D. 5,565 ft.; comp. for gas well.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Phelan, C. Williams Sur. Drk.

Humble O. & R. Co. No. 1 Tyrell Combest, C. Williams Sur. 10¾-in. csg. 1,991 ft.; top sd. 6,736 ft.; 7-in. csg. 6,771 ft.; T.D. 6,779 ft.; flowing; no gauge.

Glenn H. McCarthy No. 2-A B. M. Long, H. Williams Sur. Cg. sdy. sh. 6,011 ft.

Glenn H. McCarthy No. 1-H Longe, H. Williams Sur. Pits.

Normandie Oil Corp. No 1 G. C. Prutzman, H. Williams Sur. R.U.

Texas Co. No. 1 Yount, A. Houston Sur. R.U.

Fannett-Jefferson County

Gulf Oil Corp. No. 19 Thomas, W. H. Smith Sur. Drlg. sh. 2,710 ft.

Nome—Jefferson County

Shell Pet. Corp. No. 1 Paggi, J. W. Kirby Sur. T.D. 6,055 ft.; 7-in. csg. 6,007 ft.

Sun Oil Co. No. 1 Longe, J. Blair Sur. R.U.

Sur Oil Co. No. 2 Long, John Blair Sur. T.D. 6,057 ft.; 7-in. csg. 5,989 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 3 McDonald, Chas. Smith Sur. Drlg. sd. 5,882 ft.

Hankamer—Liberty County

Gulf Oil Corp. No. 1 Bernice Hankamer. R.U.

Gulf Oil Corp. No. 1 Weaver, A. W. Weaver Sur. Drlg. sdy. sh. 5,439 ft.

Gulf Oil Corp. No. 1 J. L. Weaver, Drlg. sh. 3,925 ft.

Uscan Oil Co. No. 5 Ezzell, Levi Barrow Sur. T.D. 5,678 ft.; 7-in. csg. 2,689 ft.; waiting comp. of No. 6.

Uscan Oil Co. No. 6 Ezzell, due south of No. 5 Levi Barrow Sur. T.D. 5,815 ft.; 7-in. csg. 5,765 ft.; P.B. 2,627 ft., perf. csg. from 2,600-16 ft.; swbd. dry.

Hull—Liberty County

Gulf Oil Corp. No. 112 Phoenix, J. Devore Sur. Comp.; no report.

Esperson—Liberty County

Circle W Oil Co. No. 1 Kay, M. Duncan Sur. R.U.

General Crude Oil Co. No. 19 Davis, D. Kokernot Sur. Drlg. sh. and L. 3,375 ft.; abd. 4,358 ft.

General Crude Oil Co. No. 30 Esperson, 13⅜-in. csg. 85 ft.; drlg. wtr. sd. 2,-873 ft.; abd. 4,670 ft.

General Crude Oil Co. No. 19 Moores Bluff, M. Duncan Sur. Drlg. sdy. sh. 2,211 ft.; T.D. 2,855 ft.; 7-in. csg. 2,838 ft.; drlg. 2,874 ft.

Bay City—Matagorda County

Hamman Expl. Co. No. 1 J. H. Crocker. E. Hall Sur. M.I.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Drlg. sh. 864 ft.

Van Vleck—Matagorda County

McDaniel Drlg. Co. No. 1 C. T. Dye, M. Cummins Sur. R.U.

Skelly Oil Co. No. 9-C Cobb, M. Cummins Sur. T.D. 8,291 ft.; rng. 5½-in. blank liner.

Skelly Oil Co. No. 10 C. Cobb, M. Cummins Sur. T.D. 7,490 ft.; 7⅝-in. csg. 7,-490 ft.; I.P. 628 B.P.D., ½-in. ck.

Skelly Oil Co. No. 2 Metzer, M. Cummins Sur. T.D. 7,500 ft.; 7-in. csg. on bottom. T.D. 8,289 ft.; I.P. 215 bbls. in 24 hrs. through ⅝-in. ck.; W.P. 1,950 lbs.; C.P. 1,000 lbs.

Conroe—Montgomery County

Adeltex Oil Co. No. 1 Lewellen, R. G. Hunter Sur. Drk.

Alpha Pet. Co. No. 26 Falvey, S. Harris Sur. Drlg. sh. 4,830 ft.

A. U. Morrison No. 2 McComb, L. Smith Sur. 10¾-in. csg. 750 ft.; drlg. sh. 4,-637 ft.

Strake Pet. Co. No. 13 Keystone Mills, L. Smith Sur. Sh. 4,927 ft.

Ace—Polk County

Dick Schwab No. 2-A Kirby West Lbr. Co., P. A. Sublett Sur. T.D. 4,863 ft.; P.B. 4,550 ft.; abd.

Orange—Orange County

B. Turnbull No. 1 Lutcher Moore, J. Dyson Sur. Drlg. sh. 1,430 ft.

Greta—Refugio County

Hewitt & Daugherty No. 29 Lambert, Carr & Connell Sur. Drlg. sh. 4,010 ft.

Hewitt & Daugherty No. 31 Lambert, Swisher Sur. Drlg. sh. 5,210 ft.

Josey & Bruton No. 2 Lambert, Swisher Sur. T.D. 5,795 ft.; 7-in. csg. 5,774 ft.; W.O.C.

United Gas Co. No. 27 Lambert, C. & Hardwick Sur. T.D. 5,905 ft.; I.P. 370 B.P.D. through 3/16-in. choke.

United Gas Co. No. 28 Lambert, Hew Sur. Drlg. sh. 5,670 ft.

Refugio—Refugio County

United Gas Co. No. 16 Heard, Lot 13, Refugio townsite. Drlg. sh. 4,978 ft.

United Gas Co. No. 4 Rea, Lot 1, Block 5, Drlg. 4,330 ft.

Quintana-O'Connor—Refugio County

Quintana Pet. Co. No. 1 Mary C. Bauer, Ximines Sur. Drlg. sh. 4,430 ft.

Quintana Oil Co. No. 4-C O'Connor, G. W. Maine Sur. T.D. 5,929 ft.; W.O.C.

Quintana Oil Co. No. 38-A O'Connor, Swisher Sur. 5-in. csg. 5,924 ft.; I.P. 1,-398 B.P.D., ⅝-in. choke.

Quintana Oil Co. No. 2 Heard, Ximines Sur. Drk.

Quintana Pet. Co. No. 39-A Tom O'Connor, Swisher Sur. Cmtd. sur. csg.

Quintana Pet. Co. No. 5-C Tom O'Connor, Swisher Sur. Drlg. sh. 5,890 ft.

Hughes—Victoria County

Portilla Oil Corp. No. 2 P. H. Welder, Felipe Dimmitt Sur., 933 ft. N of No. 1, T.D. 4,820 ft.; well went dead; reperftd. and tested S.W.; no report.

Placedo—Victoria County

American Liberty Oil Co. No. 2 Cortez, Brownson Sur. Drk.

Barnsdall-American Liberty Oil Co. No. 6 Pickering and Roos, J. M. Brownson Sur. T.D. 4,770 ft.; P.B. 4,400 ft.

Barnsdall-American Liberty Co. No. 7 Pickering and Foos, S.A.&M.G. Survey. Drlg. sh. 864 ft.

Crown Central Oil Co. No. 6 Gebrauer, S.A.&M.G. Sur. 10¾-in. csg. 814 ft. T.D. 4,773 ft.; 7-in. csg. 4,753 ft.; swbg.

Harrison & Abercrombie No. 4 Vess, Brownson Sur. T.D. 4,766 ft.; 7-in. csg. 4,746 ft.; S.D.

Magnolia Pet. Co. No. 2 Henderson and Pickering, Wm. Rupley Sur. Drlg. sh. 882 ft.

E. L. Smith Oil Co. No. 2 E. Boehn, S.A. &M.G. Sur. 10¾-in. csg. 803 ft.; T.D. 4,776 ft.; 7-in. csg. 4,760 ft.; W.O.C.

Westgate Oil Co. No. 4 Mieska, J. M. Brownson Sur. Loc.

Clay Creek—Washington County

Pompkal et al No. 3 Klatle, S.D. 576 ft.

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. T.D. 7,454 ft.; 7-in. csg. 7,445 ft.; drlg. plug.

Louise—Wharton County

Pure Oil Co. No. 1 L. E. Lancaster, M. Cummings Sur. R.U.

Pure Oil Co. No. 2 Jones, Morris and Cummings Sur. T.D. 5,165 ft.; 7-in. csg. 5,149 ft.; P.B. to 5,160 ft.; I.P. 12 B.P.D., ¼-in. ck.; T.P. 1,100 lbs.; C.P. 1,260 lbs.

Magnet—Wharton County

P. B. Watson No. 1 Sweet, Smith and McKinzie Sur., Lot 4, Blk. 84. M.I.

Pickett Ridge—Wharton County

Texas Co. No. 1 A. N. Nilson, Blk. 37, I.&G.N. Sur. Drlg. sd. rock 423 ft.

Texas Co. No. 26-A Pierce, I.&G.N. Sur. No. 38. T.D. 4,708 ft.; 7-in. csg. 4,708 ft.; T.D. 4,713 ft.; rigged up to pump.

Texas Co. No. 27-A Pierce, L.&G.N. Sur. No. 38. T.D. 4,711 ft.; 7-in. csg. 4,705 ft.; blew dry 4 times, 30 bbls. of oil and 16 bbls. of wtr.

Texas Co. No. 32-A Pierce, I.&G.N. Sur. No. 38. Drlg. sh. and L. 2,114 ft.

Withers—Wharton County

Texas Co. No. 14-C Withers, John Caldwell Sur. R.U.

Texas Co. No. 12-C Pierce, Wm. Pettus Sur. 10-in. csg. 1,152 ft.; T.D. 1,162 ft.; drlg. sh. and L. 4,362 ft.

Texas Co. No. 13-C Pierce, John Caldwell Sur. Drlg. sh. and L. 3,200 ft.

GULF COAST WILDCATS

Austin County

W. H. Mitchell et al No. 1 F. Fenner, J Fitzgibbons Sur. S.D. 2,650 ft.

Brazoria County

Texas Co. No. 1 Robbins, J. W. Brougham Sur. 11¾-in. csg. 4,960 ft.; drlg. sdy. sh. 5,754 ft.

Calhoun County

Benedum & Trees No. 1 Roemer Est., John T. Oggsberry Sur. 13-in. csg. 1,567 ft.; T.D. 7,106 ft.; 8⅝-in. csg. 5,910 ft.; S.D.

Continental Oil Co. No. 1 Austin Estate, sec. 12, Blk. H. P.B. 8,521 ft.; sdtrkd. 8,471 ft.; drld. to 8,476 ft.; T.D.

Chambers County

Sun Oil Co. No. 2 Hamilton, J. T. White Sur. 13⅝-in. csg. 1,385 ft.; W.O.C.

Colorado County

Coyle-Concord & Sterling No. 1 Mary E. South, I.&G.N. Sur., sec. 41, 10¾-in. csg. 755 ft.; reaming to make D.S.T. from 6,113-25 ft.

Galveston County

Shell Pet. Corp. No. 1 Maco Stewart, Spillman Sur. 9⅝-in. csg. 7,707 ft.; T.D. 9,-172 ft. sh.; rng. 7-in. liner.

Grimes County

Fred Harris No. 1 J. C. Change, Donoho Sur. Drk.

Crook Bros. No. 1 Greer, B. D. O'Conner Sur. No report.

Hardin County

Republic-Houston Oil Co. No. 1 Brooks. T.D. 6,982 ft.; 7-in. csg. 6,953 ft.; blew out; caught fire; cratering; est. 50,000,-000 ft. of gas and 2,500-3,000 bbls. of oil.

Republic-Houston Oil Co. No. 2 Brooks, G. W. Brooks Sur. (relief well). Cmtd. 7-in. csg. 7,027 ft.; drlg. plug.

Harris County

Bunte O. & G. Co. No. 1 Graves, C. Walters Sur. 10-in. csg. 755 ft.; T.D. 6,428 ft.; sd. showing oil and gas; P.B. and sdtrkd. at 310 ft.; drlg. in new hole 1,-800 ft.

D. B. Cherry et al No. 1 Bert J. Dodge, Josiah Harrell Sur. Spudded.

Stanolind O. & G. Co. No. 1 Angelo Candelari Reels and Trobough Sur. 10¾-in. csg. 1,404 ft.; drlg. sh. 5,142 ft.

Jackson County

Steinberger Pet. Corp. No. 1 Drushel, F. Rodriguez Sur. T.D. 7,155 ft.; P.B. sdtk.; T.D. 7,180 ft.; 7-in. csg. 7,158 ft.; fsg.

Jefferson County

Sun Oil Co. No. 1 Acorn, sec. 103. R.U.
Sun Oil Co. No. 1 J. E. Broussard, W. B. Burton Lge. R.U.

Lavaca County

Cole Pet. Co. No. 1 Reed-Nollkamper, A. Smothers Sur. S.D. 2,395 ft.

Liberty County

J. C. Mayo No. 1 K. Moore, J. F. De Romayor Sur. Spudded.

Matagorda County

Cockburn Oil Co. No. 8 Hawkins, D. McCarthy Sur. Abd.; T.D. 5,385 ft.
Continental Oil Co. No. 2 Robbins, J. C. Franz Sur. Drk.
Tatts & Harris No. 1 Pierce, Lot 23, W. E. Wallace Sur. Drlg. sh. 3,888 ft.

Montgomery County

H. E. Williams No. 1 Peal, Owen Shannon Sur. R.U.
Chapman No. 1 Foster, D. Pevy Hous Sur. Drk.; prep. to spud.

Orange County

Tide Water Oil Co. No. 1-A E. W. Brown, Welsey Dykes Sur. Abd.; T.D. 7,867 ft.

Polk County

Feyton No. 1 McDonnald, P. J. Menard Sur. Drlg. sh. 321 ft.

Refugio County

Benedum & Trees No. 1 R. H. Welder, Juan Pabedan Sur. Abd. 7,357 ft.

Victoria County

Plymouth Oil Co. No. 1 Welder, S.A.&M. S. Sur. No. 153. Drk.
Plymouth Oil Co. No. 1 J. J. Welder, S A. Balding Sur. T.D. 5,727 ft.; tstd. 560 lbs. of pressure; 1 jt. of mud with distillate odor on D.S.T.

Walker County

W. B. Gossage No. 1 Carey Ld. & Dev. Co., D. M. McDonald Sur. Drk.

Wharton County

Feimont Oil Corp. No. 1 G. Mitchell, D. Wade Sur. Cg. sh. 5,508 ft.
Pure Oil Co. No. 1 G. A. Duffy, sec. 107, E.G.R.R. Sur. Drlg. sdy. sh. 5,747 ft.
Fure Oil Co. No. 1 Topeka Natl. Bank, 160-ac. tr., W. F. York Sur. 10¾-in. csg. 1,460 ft.; drlg. sh. 4,739 ft.
Texas Crusader Oil Co. No. 1 fee, J. Smith & McKenzie Sur. 10¾-in. csg. 1,234 ft.; 7-in. csg. cmtd. 5,562 ft.; 7-in. cmtd. made squeeze job 5,536-37 ft.; W.O.C.
Texas Crusader Oil Co. No. 1 Hawes and Neal, S. Castleman Sur. 10¾-in. csg. 975 ft.; W.O.C.

S. W. TEXAS WILDCATS

Atascosa County

Atascosa Trust No. 1 Domsch, 160 ft. S line, 300 ft. E line, 152-ac. lease, J. T Russel Sur. 1,222. T.D. 4,010 ft.; P.B. 3,-500 ft.; reacidized; swbg.
Helvetia Oil Co. No. 1 S. Pratt, 1,400 ft. NW line, 3,470 ft. SW line, J. de la Garza Sur. T.D. 3,116 ft.; P.B. 3,000 ft.; drlg. ahead 3,473 ft.

Bastrop County

Paul Teas No. 1 Vinklarek, S. Millet Lge. Laying wtr. line; drlg. 4,456 ft.

Bee County

W. V. Bowles No. 1 Mengers, W. Allen Sur. No report.
L. Glasscock No. 1 Ablinger, SE cor. 110-ac. tr., Ryan Sur. S.D. 304 ft.
Randon Oil Co. No. 1 Handy Bros., J. Tool Sur. Drlg. 3,567 ft.
Joe White No. 1 McKinney, Spencer Morris Sur. Set sur. csg. 144 ft.; W.O.C.

Burleson County

Red Bank Oil Co. No. 1 Grann, 2,875 ft. S line, 1,500 ft. E line, E. Santel Sur. T.D. 4,886 ft.; plug back.

Caldwell County

Adams and Lyles No. 1 Dale, W. Spiller Sur. No report.
Brown Drlg. Co. No. 1 Pope, J. D. Rains Sur. R.U.
Elam et al No. 1 Francis, 450 ft. SW and SE lines, 291-ac. tr., Young Sur. Sd. 1,740-45 ft.; set csg. 1,737 ft.; milling.
John Storey No. 1 Smith, Pablo Martinez Sur. Drlg. 1,486 ft.
Swearingen Oil Co. No. 2 Davis, Floyd Sur. No report.

Duval County

Benedum & Trees Oil Co. No. 1 Sevier, 1,300 ft. S line, 980 ft. E line tr., Palo Blanquito Sur. Set 10-in. csg. 1,010 ft.; drlg. 1,076 ft.
Conservative Oil Co. No. 3 D.C.R.C., N½ Blk. 17, Sur. R.U.
Conservative Oil Co. No. 1 Sun-D.C.R.C., NE¼, Sur. 51. Set 7-in. csg. 1,542 ft.; W.O.C.
Frank Gravis No. 2 Gravis, 3,050 ft. SE line, 990 ft. SW line, Sur. 250. Drlg. 2,716 ft.
Lipscomb & Daubert No. 1 Peters, 330 ft. S line, 1,650 ft. E line, Mitigart Sur. 321. Spudded in, S.D. 700 ft.
Intrepid Oil Co. No. 3 Parr, 723 ft. S and E lines, Sur. 226. T.D. 4,737 ft.; T.D. 4,737 ft.; T.A.
Shell Pet. Corp. No. 1 Taylor, 330 ft. S and W lines, NW¼, Sur. 214. Set surf. csg. 114 ft.; T.D. 3,156 ft.; P.B. 1,710 ft.; swbg.

Edwards County

Phillip Miers & Turney No. 1 Turney, sec. 164, C.C.S.D.&R.G.N.G. R.R. Sur. No report.
Plateau Oil Co. No. 1 R. L. Hatch, sec. 66, J. W. May Sur. T.D. 1,240 ft.; S.D., floods.

Goliad County

California Co. No. 1 Langrebe, 465 ft. N and E lines tract, Thomas Hancock Sur. T.D. 5,050 ft.; P.B. 4,797 ft.; attempting to complete.
Feimont Oil Corp. No. 1 Metz, G. Barrera Sur. Fsg. 2,000 ft.; T.D. 5,660 ft.
Sun Oil Co. No. 1 Fromme, A. Martle Sur. Loc.

Gonzales County

M. S. Holliday No. 1 Edwards, W. W. Pace Lge. Loc.

Guadalupe County

Paul Armstrong No. 1 Tiller, J. C. King Sur. Drlg. 823 ft.
T. H. Coulter No. 1 Engleke, H. Cottle Sur. R.U.
Long & Ross No. 1 Feltz, Dunn Sur. Drlg. 429 ft.

Hidalgo County

Helen K. Maxwell No. 1 Hidalgo Wtr. Dist. No. 2, Lot 11, Blk. 20. T.D. 731 ft.; pmpg.
H. J. Porter No. 1 Sweeny Estate, Lot 1, Wood Subd. No. 2. Set 12¼-in. csg. 300 ft.; W.O.C.

Jim Hogg County

Theo. Hicks No. 1 Kohler, sec. 9, Noriscitas Gr. Cg. 2,423 ft.
Locke Purnell and Gifford Oil Co. No. 1 Gallagher, Blk. 128, Pippin Division, Randado Gr. Cg. 3,012 ft.
Henry Swift et al No. 1 Holbien, Blk. 58, sec. 3, Las Animas Gr. Drlg. sh. 1,783 ft.

Jim Wells County

R. A. Graddy No. 1 Bennett, 330 ft. N and W lines, Sec. 76, Lot 87. Sd. 2,343-65 ft.; D.S.T. 280 ft.; P.L.O. and 20 ft. w. water in 15 min.; rng. csg.
Glst & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines, Sur. 151. Set 7-in. csg. 2,340 ft.; W.O.C.
Tom Graham No. 1 Luby Estate, Sh. 4, Los Presnos de Abajo Gr. Drlg. sh. 3,187 ft.
E. M. Jones No. 1 Almond, N½, Sur. 7. R.U.
La Jita Corp. No. 1 Schallert, 3,919 ft. S line, 2,097 ft. E line tr., Las Presenos Abajo Gr. Drlg. 4,673 ft.
Putnam & Stewart No. 1 Canales, C Blk 32, Mosser Subd., Canales Est. Drlg. 2,463 ft.

Karnes County

Luling O. & G. Co. No. 1 Wheeler, Carlos Martinez Sur. Spudded to 60 ft. S.D.

Kleberg County

E. B. Clark No. 1 Kivlin, 150 ft. N and E lines, Blk. 8, sec. 39, Kingsville Town & Improvement Subd. T.D. 2,142 ft.; S.O.

LaSalle County

W. H. Vernon No. 1 Las Abias ranch, 150 ft. N line, midway E and W lines, sec. 726. No report.

Live Oak County

Barber & Miller No. 1 Blanks, A.B.&M. Sur. No. 103. S.D. 650 ft.
Dirks Bros. No. 1 Atkinson, Louis Ayres Sur. Drlg. 626 ft.
J. H. Durbin No. 4 Marbach, S. Hays Sur. No report.
R. Feltner No. 1 Sanger, 990 ft. S line, 330 ft. W line, E½, Sur. 391. R.U.
Loma Oil Co. No. 2 Palmer, 150 ft. NW line, 1,800 ft. NE line tr., Sparks Sur. M.I.M.
O. W. Killam No. 1 Schultz Live Stock Co., 1,320 ft. S line, 640-ac. tr., 150 ft. W of highway, Hefferman Sur. Drlg 1,536 ft.
Maryland Oil Co. No. 1 Geo. West Est., Lot 399, James Vaughn Sur. R.U.
Sun Oil Co. No. 1 James, Pat McGlover Sur. Loc.

Maverick County

Rio Dev. Co. No. 1 Winchester Kelson, 150 ft. W line, 750 ft. S line, E½, 130-ac. tr. S.D. 305 ft.
Thornton & Underwood No. 1 Thompson, 2,000 ft. SW line, 750 ft. SE line, Uvalde Co. Sch. Ld., Sur. 2. Derrick.

McMullen County

L. D. Armsby No. 9 Griffith, 650 ft. N line, 150 ft. NE of No. 8. R.U.
Darby Pet. Co. No. 1-A Hagist, SE¼, sec. 13. T.D. 2,520 ft.; D.&A.
F. R. Floyd et al No. 1 Plaserk, 150 ft. N and E lines, Blk. 2, Garner Sur. T.D. 1,135 ft.
Hagen Stewart Oil Co. No. 1 Kunz, M. Hely Sur. Drlg. 807 ft.
R. H. Hill No. 1-A Richardson, Sur. 158. Drlg. 2,786 ft.
W. P. Howard No. 5 Claunch, M. Hely Sur. 342 S.D. 760 ft.
C. I. Jennings No. 1 Regan, 1,070 ft. S. Frio River, 330 ft. W line, 642-a. tr., Haley Gr. S.D. 1,026 ft.
Magnolia Pet. Co. No. 1 Teal, 10,297 ft. N line, 3,310 ft. E line, Kuykendall Sur. T.D. 4,059 ft.; D.&A.
F. W. Nute No. 1 Fehler, 700 ft. W line, 570 ft. S line, 250-ac. tr., Byrne-Pittrick Grants. Loc.
I. Taylor No. 1 Lark, 150 ft. S and W lines, Lot 72, Scrugham Sur. T.D. 973 ft.; R.U.

Medina County

N. C. Johnson No. 1 Taylor, 360 ft. E line, 168 ft. S line, 320-ac. tr., Castro Sur. 136. T.D. 400 ft.; S.D.
G. N. Witting No. 1 Hondo Natl. Farm Loan Assn., Geo. Studer Sur. 214. T.D. 1,369 ft.; stdg.

Nueces County

Barnsdall Oil Co. No. 1 Weil, Lot 5, McBride Partition. Cg. 4,283 ft.
Bunte O. & G. Co. and Woodley Pet. Co. No. 1 Cain, sec. 4, Kinney Subd. Cg. 3,987 ft.
J. T. Cox et al No. 1 Harvey, 150 ft. S and E lines, Sh. 11, S.D. 4,280 ft.; (corrected).
G. M. Richardson No. 1 Carter, cen. NW¼, SE¼ sec. 8, Laurella Farms Trs. Drk.

San Patricio County

Eleanor Oil Co. No. 1 Kline, Lot 5, Blk. "C," Coleman-Fulton Pasture Subd. T.D. 6,650 ft.; ran Schlumberger.
Plymouth Oil Co. No. 2-D Welder, 466 ft. N and E lines, sec. 4. T.D. 6,500 ft.; D.&A.
Trinity Drillers, Inc., No. 1 Mayfield, Lot 11, Roos Subd. T.D. 6,010 ft.; D.&A.

Starr County

J. F. Anderson No. 1 Yzagierre, Tr. 1, Porc. 79, J. of Camargo, T.D. 2,910 ft.; S.D.; repairs.
H. L. Bass No. 1 Haden, 3,740 ft. S line, 555 ft. W line, Sh. 47, Porc. 80, M.I.M.
Bennett & Lowe No. 1 Guerra, 330 ft. SW line, 250 ft. NW line, sec. 293. Drlg. sh. 1,623 ft.
J. H. Clopton No. 4 Roos, 330 ft. S and W lines, Blk. 5, Porc. 91. Drlg. 2,875 ft.
F. Davenport No. 1 Kelsey-Bass, 534 ft. S line, N 585-ac. tr., 2,856 ft. E line, Porc. 87. Set 1,000 ft. of surf. csg. Drlg. 3,182 ft.
Davenport-Slick-Urschel No. 1 Slick Est Davenport ranch, sec. 485. Drlg. shale 3,211 ft.
Double D Oil Co. No. 1 Kelsey-Bass, N½, Porc. 87. Cg. sh. 3,107 ft.
Leach & Mallott No. 2 Dana Est., Porc. 84, 2,100 ft. Rio Grande River. M.I.M.

Webb County

R. S. Bolling No. 1 Elleson Furniture Co., Sur. 466. T.D. 2,007 ft.; D.&A.
Mid-Continent Pet. Corp. and Oklahoma Co. of Texas No. 1 Laubscher, 330 ft. NE and NW lines, NW¼, sec. 1,394 Drlg. sh. 1,989 ft.
Ivan Howard No. 1 Frost Nat. Bank, Sur. 733. Drlg. 1,087 ft.
Lu-Tex Oil Co. No. 1 Lone Star, Porc. 13; (W.O.). Fsg. 2,317 ft.
Sackett & Keoghan No. 1 Wilmot, W 640-ac. tr., Sur. 201. R.U.

Williamson County

H. H. Coffield et al No. 1 Thorne, 600 ft. N line, 330 ft. W line, 76-ac. tr., J. Vevil Sur. S.D. 800 ft.

Zapata County

Gilcrease Oil Co. No. 1 Trevino, Blk. 5, sec. 3, Porcs. 2 and 3. Drlg. 1,117 ft.
Hill & Hill No. 1 Alexander, Porc. 25. T.D. 2,606 ft.; to D.D.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Oil Prod. Co. No. 1 McCampbell, 330 ft. NE and NW lines, Lot 8, Blk. 41, Subd. 4. Loc.
J. Nelson No. 1 Riggs, 330 ft. NW line, 213 ft. SW line, 6.46-ac. tr., Trs. 12 and 13, Blk. 16. Loc.

Foley—Bee County

Sizrod Oil Corp. No. 1 Holzmark, 330 ft. W line, 990 ft. S line, 20-ac. tr., May Sur. Sd. 3,311-31 ft.; S.G.; sd. 3,331-36 ft.; S.O.; cg. 3,350 ft.

Plummer—Bee County

D. R. Semmes No. 1 Plummer, 450 ft. S and E lines, 40-ac. tr., Blk. 33, Chessman Sur. 144. S.D.; 3,000 ft.; repairs.

Voss—Bee County

Devonian Oil Co. No. 2 Voss, 660 ft. N No. 1. S. May Sur. M.I.M.
Humble O. & R. Co. No. 1 Page, Pilkington Sur. Drlg. 4,061 ft.

Alta Verde—Brooks County

Dick Young No. 5 Singer, Blk. 12, Sur. 212. Drlg. 233 ft.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 2 Hickman, G. Hinds Sur. 2,608 ft.; pulled tubing to work over.

Driscoll—Duval County

Continental Oil Co. No. 11-A Driscoll, Sur 448 T.D. 3,423 ft.; comp.; 186 B.P.D. on ¼-in. ck.

El Mesquite—Duval County

Rogers & Rogers No. 1 Valdez, 150 ft. NE and SE lines, 80-ac. tr., Mesquite Gr Sd. 2,939-49 ft.; tstd dry; T.D. 3,500 ft.; P.B. 2,900 ft.; W.O.C.

Government Wells—Duval County

Govt. Wells Oil Co. No. 21 Lundell, Sur. 60. Loc.
Magnolia Pet. Co. No. 11 Johnson, Sur. 44. Sd. 2,325-30 ft.; W.O.C.
Southwest Prod. Co. No. 18 Wendt, SE¼, sec. 43. S.D. for wtr. 1,800 ft.

Hoffman—Duval County

Bridwell Oil Co. No. 3 Sutherland, Sd. 2,701-36 ft.; tstg.
Rogers & Rogers No. 7 Hoffman, Sur. 118. Drlg. 1,207 ft.

Kohler—Duval County

Humble O. & R. Co. No. 51 Kohler, 330 ft. S line, 1,650 ft. E line, Sur. 171. R.U.

Labbe—Duval County

Stanolind and Mills Bennett No. 1 Yates, 2,149 ft. S line, 2,800 ft. W line, sec. 560, 2,438-41 ft.; set csg.; attempting completion.

Loma Novia—Duval County

Bridwell Oil Co. No. 14 Wm. Hubbard, Sur. 71. Drlg. 1,514 ft.
Bridwell Oil Co. No. 7-D Hubbard, Sur. 73. Set csg. 2,524 ft.; comp.; no gauge.
Duval Oil Corp. No. 27 B.C.C., Sur. 57. T.D. 2,754 ft.; comp. jetting est. 100 B.P.D.
Humble O. & R. Co. No. 50-B Hubbard, Sur. 52. T.D. 2,783 ft.; comp. 11 B.P.H.
Humble O. & R. Co. No. 55-B Hubbard, Sur. 52. Set csg. 2,770 ft.; W.O.C.
Humble O. & R. Co. No. 56-B Hubbard, Sur. 52. Loc.
Humble O. & R. Co. No. 17 Ruiz, sec. 563. Drlg. sh. 2,763 ft.
Humble O. & R. Co. No. 15 Vela, Sur. 42. Sd. 2,756-70 ft.; W.O.C.
Magnolia Pet. Co. No. 45 Hahl, Sur. 67. Drlg. 2,173 ft.
Joe Palmer No. 1 Hahl, Sur. 61. S.D. 2,-339 ft.; D.&A.
Pitkin & Goldston No. 4 Breeding, Sur. 57. Cg. 2,817 ft.
Reynosa Oil Co. No. 7 Hubbard, Sur. 75. Comp. 32 B.P.D.; T.D. 2,575 ft.
Rosan Oil Co. No. 1-B Hubbard, Sur. 71. Cg. 2,517 ft.
Shell Pet. Corp. No. 10 Hubbard Sur. 77. Drk.; M.I.M.
Shell Pet. Corp. No. 17 Mendoza, Sur. 68. Set 7-in. csg. 2,727 ft.; W.O.C.

Loma Vista—Duval County

Pan American Pet. Co. No. 1-H Welder, 330 ft. N and W lines, 160-ac. tr., Sur. 103. T.D. 3,006 ft.; hole bridged at 1,-000 ft.; C.O.
Shell Pet. Corp. No. 1-B Welder, 330 ft. S line, 2,590 ft. W line, Sur. 69. T.D. 3,242 ft.; P.B. 2,867 ft.; W.O. orders.

Peters—Duval County

Tom Graham No. 2 Sutherland, Sur. 188, S.D. 2,706 ft.
Windsor Oil Co. No. 4-B Peters, 660 ft. N No. 3-B, 330 ft. E line, sec. 34. Cg. 1,-711 ft.

Seven Sisters—Duval County

Atlantic Oil Prod. Co. No. 10-E Welder, Sur. 381, Sd. 2,413-27 ft.; set csg.; W.O.C.
Harvey & Henderson No. 1 Welder, Sur. 102. Spudding.
Humble O. & R. Co. No. 27 Smith, Sur. 382. Sd. 2,440-56 ft.; W.O.C.
Humble O. & R. Co. No. 29 Smith, Sur. 382. Drlg. sh. 2,205 ft.
Humble O. & R. Co. No. 11 Wright Sur. 118, T.D. 2,501 ft.; comp.; 12 B.P.H.
Humble O. & R. Co. No. 12 Wright, Sur. 118. Sd. 2,513-19 ft.; set csg.; W.O.C.
Illinois Pet. Co. No. 9 Hazelwood, Sur. 110. Sd. 2,208-20 ft.; set csg.; W.O.C.
Magnolia Pet. Co. No. 2 Neely, Sur. 220. Sd. 2,511-19 ft.; comp.; 12 B.P.H. on ½-in. ck.
Magnolia Pet. Co. No. 3 Neely, Sur. 220. R.U.
Reliance Oil & Royalty Co. No. 6 Drummond, Sur. 308. Sd. 2,527-51 ft.; set csg.; W.O.C.
Reliance Oil & Royalty Co. No. 12 Drummond, Sur. 308. T.D. 2,405 ft.; comp. 45 B.P.H.
Wellington Oil Co. of Del. (Santa Clara) No. 10-B Welder, Sur. 381, Cg. 1,906 ft.
Wellington Oil Co. of Del. (Santa Clara) No. 3-D Welder, Sur. 381. Drlg. 1,477 ft.
Westheimer & Daube No. 18 Campos, Sur. 224. Drlg. 2,017 ft.

North Pettus—Goliad County

Bostex Oil Co. No. 1 Lackey, 1,650 ft. NW line, J. Gomez Sur., 1,660 ft. SW of No. 3-A. Cg. 3,819 ft.
Jane Oil Co. No. 10 Mudd, B.&B. Sur. Sd. 3,677-93½ ft.; comp.; 250 B.P.D. on ¼-in. ck.

Mercedes—Hidalgo County

Texas Sulphur Co. No. 10 American Rio Grande L. & I. Co., Blk. 50, Tr. 2,418, N. Caprisallo Dist. Cg. sh. 8,211 ft.

Mestanas—Hidalgo County

Pantana Pet. Co. No. 1 Harding, Lot 11, Blk. 94, Missouri-Kansas L. & I. Co., Subd. Mestanos Gr. Sd. 6,590-6,640 ft.; odor oil and gas; drlg. hd. sh. 7,097 ft.

Samfordyce—Hidalgo County

Gem Oil Co. No. 3-A Seabury, Tr. 256, Porc. 38. Spudded.
Harrison-Danvers No. 1 Guerra, Tr. 251, Porc. 38. R.U.
Harrison and Danvers No. 2-A Villalon, Tr. 252, Porc. 39. T.D. 2,982 ft.; set 5-in. csg. 2,978 ft.; W.O.C.
Harrison & Danvers No. 1-C Villalon, Sh. 252, Porc. 39. Sd. 2,944-55 ft.; comp.
Henshaw Bros. No. 2 Yturria, Tr. "B," E½ Porc. 100. Set csg. 204 ft.; W.O.C.

Colorado—Jim Hogg County

J. H. Meek No. 2 A. Martinez, Lot 3, Sur. 623. Cg. 2,916 ft.

Henne-Winch-Fariss—Jim Hogg County

Sam Payne No. 1 Holbien, 150 ft. N and W lines, Blk. 10, Share 3, Las Animas Gr. R.U.

Bentonville—Jim Wells County

La Jita Corp. No. 1 Frame Bowers, 330 ft. N and E lines, sec. 14. Drlg. 4,357 ft.

Lagita Corp. No. 2 Pope, SE¼, sec. 20. Drlg. 3,126 ft.

Lucas—Live Oak County

Houston Oil Co. No. 36 Cartwright, 808 ft. E of No. 35. Drlg. 2,207 ft.

Calliham—McMullen County

Axarita Oil Co. No. 3 Lark, Blk. 56. Scrugham Sur. Set csg. 948 ft.; T.D. 953 ft.; swabbing.

Agua Dulce—Nueces County

Texon Drlg. Co. No. 1 Austin, Sh. 2, Chapman, Subd. No report.

Texon Royalty Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line tr., Longorio grant. T.D. 6,557 ft.; 7-in. csg. 5,800 ft.; tstd.; no show; S.D.

Texon Drlg. Co. No. 1 McCoy, Sh. 1, Palo Alto Part. Drlg. 1,236 ft.

Clara Driscoll—Nueces County

W. D. Hines No. 1 Sevier, 280 ft. S and E lines, W½, sec. 60. Drlg. sh. 2,814 ft.

Hiram Reed No. 2 Roper, C Lot 1, Blk. E. Driscoll townsite. Cg. 3,896 ft.

Wellington Oil Co. of Del. (Santa Clara) No. 1-A Sevier, Wm. Gamale Sur. Sd. 3,810-17 ft.; D.S.T. 2,000 ft. oil in 15 min.; set csg.; W.O.C.

Flour Bluff—Nueces County

Barnsdall Oil Co. and Flour Bluff Corp No. 2 Phillips, C Lot 12, sec. 55. T.D. 6,641 ft.; prep. test.

Costa Oil Co. No. 1 Henderson, 530 ft. E line, 660 ft. S line, Lot 10, sec. 48. Cg. 6,512 ft.

Gem Oil Co. No. 1 J. T. Smith, Lots 20 and 21, sec. 47. Sd. 6,641-56 ft.; comp.; est. 150 B.P.D. on ⅛-in. ck.

Humble O. & R. Co. No. 1 Edwards, C Lot 24, Blk. 48. M.I. rig.

Humble O. & R. Co. No. 2 Phillips, C Lot 2, Blk. 48. M.I. rig.

Humble O. & R. Co. No. 1 Rankin, C Lot 27, Blk. 47. M.I. rig.

Humble O. & R. Co No. 1 Robertson, C Lot 23, Blk. 47. M.I. rig.

S. Paul No. 1 Moulter, Blk. 16, sec. 41. Encinal Garden tracts. Loc.

Saxet Heights—Nueces County

Cox No. 2 Priour, Blk. 12, Bancroft Farm Lots. R.U.

W. H. Harrison No. 1 fee, Villareal Gr. T.D. 4,071 ft.; comp.; 128 B.P.D. on 3/16-in. ck.; sd. 4,053-71 ft.

J. A. Lavender, No. 1 Long, C 1-ac. tr., Blk. 3, Ellendale Gardens No. 3. Drlg. plugs; T.D. 4,062 ft.

Morgan Bros. No. 2 Bender, Blk. C, Harbor View Estates. T.D. 4,085 ft.; failed to flow; S.D.

W. N. Paul No. 2 Schallert, cen. Blk. "C." Harbor View Addn. S.D. 1,800 ft.; W.O.

Pedernal Oil Co. No. 1 John, Blk. 14. Oak Park Addn. S.D. 4,110 ft.; orders.

Pedernal Oil Co. No. 1 McCaughan, cen. Blk. 17, Oak Park Addn. Set surf. csg. 500 ft.; no report.

Port O. & G. Co. No. 4 Cohen, 1,066 ft. W. of No. 2, Sd. 4,062-87 ft.; comp.

Port O. & G. Co. No. 1 Corpus Christi College, 39.6-ac. tr. Drlg. 3,816 ft.

Port O. & G. Co. No. 6 Gibson, Blk. D, Harbor View Est. Drlg. 550 ft.

J. D. Proctor No. 1 Simonton. 100 ft. E line, 68 ft. N line, 1-ac. tr., Lots 46 and 47, Country Club Pl. Drlg. 2,867 ft.

Rowar and Maryland Oil Co. No. 5 Villa Gardens, Villa Gardens Subd. T.D. 4,-081 ft.; rng. csg.

Saxet O. & G. Co. No. 1 Edwards, 32-ac. tr. S.D. 4,073-79 ft.; set csg. 4,080 ft.; W.O.C.

Taylor Pet. Co. No. 1 Incarnate Word Academy, 40-ac. tr., Villareal Sur. Spd.

Saxet—Nueces County

R. B. Bryant No. 3 Frank, Sh. C, Sur. 416. T. sd. 5,832 ft.; set csg. 5,833 ft.; W.O.C.

R. B. Bryant No. 2 Scoggins, 20-ac. tr., Sur. 316. Sd. 4,569-72 ft.; run tbg.

Capital Oil Co. No. 1 Harmon, 20-ac. tr., Sur. 416. Sd. 5,840-45 ft.; comp.; no gauge.

Conroe Drlg. Co. No. 6 Bliss, 80-ac. tr., Stevens Sur. Sd. 5,814½-31 ft.; completing.

Glasscock No. 2 Johns, Sur. 582. Cg. 5,707 ft.

Great States Oil Co. and Violet Oil Co. No. 2 McGregor-Belk, Sur. 311. Set 10¾-in. csg. 1,005 ft.; W.O.C.

Great States Oil Co. and Violet Oil Co. No. 4 McGregor-Belk, Sur. 311. Spudded in.

Hiawatha Oil Co. No. 1 Hutchins-Still-well, 175 ft. W line, 1,200 ft. S line, Sur. 311. Stdg. 4,257 ft.

Hiawatha Oil Co. No. 5 Hutchins-Still-well, 330 ft. W line, Blk. 30, Sheppard Farm Lots. Sd. 5,790-5,835 ft.; comp. 200 B.P.D. on 5/32-in. choke.

Hiawatha Oil Co. No. 1-B Smith, Sur. 311. S.D. sd. 5,896 ft.

Holliday Oil Co. No. 5 Griffith, 330 ft. N line, 2,424 ft. E line, 100-ac. tr., Frank Sur. Drlg. 5,221 ft.

Houston Oil Co. No. 1 fee, Sur. 582. Sd. 5,827-30 ft.; comp.; no gauge.

Howell & Hawkins No. 1 Page Bros., 50-ac. lease, Sur. 416. Drlg 5,623 ft.

Houston Oil Co. No. 5-A Harrell, 660 ft. S of No. 2-A, Blk. 19, Sheppard Farm Lots. Set 8⅝-in. csg. 1,700 ft.; W.O.C.

Houston Oil Co. No. 7 McGregor, Sur. 311. Drlg. sd. and sh. 5,689 ft.

Magnolia Pet. Co. No. 3 Walton, Villareal Sur. Drlg. 4,147 ft.

Maryland Oil Corp. No. 2 Rand Morgan, 330 ft. N line, 990 ft. W line, 234-ac. tr., Sur. 315, Sd. 4,420-37 ft.; no show; rmg. to test; no report.

North Star Oil Co. No. 9 Morgan, 80-ac. tr., B.S.&F. Sur. Sd. 5,800-30 ft.; comp.; no gauge.

North Star Oil Co. No. 3-G Morgan, B.S. &F. Sur. Drlg. 5,157 ft.

Oso Drillers, Inc., No. 4 Roark, 660 ft. E line, 1,200 ft. S line, 106-ac. tr. R.U.

Pan American Prod. Co. No. 3-C Morgan, Sur. 405. Sd. 5,786-5,820 ft.; testing.

Pan American Prod. Co. No. 1-D Morgan, SW¼, Sur. 405. Sd. 4,420-25 ft.; test failed; running electrical survey.

Pan American Prod. Co. No. 2-D Morgan, SW¼, Sur. 405. Set csg. 4,101 ft.; drlg. plugs.

Pan American Prod. Co. No. 1-F Rand Morgan, 330 ft. S and E lines, NW¼, sec. 405. T.D. 5,888 ft.; P.B. to sdtk. 4,-500 ft.; sd. S.W. sd. 4,900 ft.; sidetracked; T.D. 5,888 ft.; D.&A.

Pan American Prod. Co. No. 1-A Sagarin, C.E.I.D.&M. Sur. Sd. 5,821-39 ft.; completing.

Phillips Pet. Co. No. 4 Morgan, 193 ft. W line, 330 ft. S line, 60-ac. tr., Sur. 405. Stdg. 3,813 ft.

Phillips Pet. Co. No. 5 Morgan, 60-ac. tr. E½, SE¼, sec. 405. T.D. 4,500 ft.; S.D.

Phillips Pet. Co. No. 6 Morgan, 990 ft. N line, 330 ft. W line, 60-ac. tr., Sur. 405. Sd. 5,835 ft.; comp. 6 B.P.H. on 5/32-in. choke.

Republic Nat. Gas Co. No. 5-B Baldwin, Blk. 19. T.D. 4,086 ft.; running csg.

Richardson Pet. Co. No. 1 Cain & Sechrist, Blk. 23, Russell Farm Lots. Sd. 4,422-34 ft.; comp. est 198 B.P.D. on ⅛-in. choke.

Richardson Pet. Co. No. 2 Quiros, Blk. 40, Sheppard Farm Tr. (W.O.). P.B.T.D. 4,-798 ft.; old T.D. 4,879 ft.; M.I.M.

Southern Minerals Corp. No. 10 Bliss, 120-ac. tr., Stevens Sur. T.D. 5,825 ft.; 7-in. csg. 5,815 ft.; comp. 129 B.P.D.

Southern Minerals Corp. No. 14 Bliss, 120-ac. tr., Stevens Sur. Sd. 5,817-29 ft.; S.D.; repairs.

Southern Minerals Corp. No. 15 Bliss, 120-ac. tr., Stevens Sur. Sd. 5,815-28 ft.; comp. 133.4 B.P.D. on ⅛-in. choke.

Southern Minerals Corp. No. 16 Bliss, 120-ac. tr., Stevens Sur. Sd. 5,823-38 ft.; drld. plugs; completing.

Southern Minerals Corp. No. 6 Isensee, 330 ft. N line, 990 ft. W line, 235-ac. tr., C. Land Sur. 404. Drlg. 6,412 ft.

Southern Minerals Corp. No. 7 Ocker, 202-ac. tr., Land Sur. Drlg. 3,023 ft.

Texon Drilling Co. No. 2 Isensee, 150 ft N line, 112 ft. W line, 13.44-ac. tr., C Land Sur. 404. Spudded.

Texon Drlg. Co. No. 1 Ocker, Sur. 404. Sd. 4,434-43 ft.; set csg.; W.O.C.

W.A.R. Oil Co. No. 1 Buckholt, Lot 4, Buckholt Partition. Cg. 4,397 ft.

Wynne Drlg. Co. and Coker No. 2 Morgan, 160-ac. tr., G.S.&F. Sur. Sd. 4,560-67 ft.; tstg.

Plymouth—San Patricio County

Centennial Oil Co. No. 2 State of Texas, Tr. 3, sec. 48. Drlg. 5,622 ft.

Centennial Oil Co. No. 4 State of Texas, Tr. 3, 450 ft. S. 77° 31 ft. W. Sur. No. 1 Hunt. T.D. oil sd. 5,617 ft.; comp.; no gauge.

Humble O. & R. Co. No. 3 Berily, 466 ft. W line, 399 ft. N line, Blk. 1, sec. 5, Fourth Addn. T.D. 5,644 ft.; comp.; est. 188 B.P.D. on 5/32-in. choke.

Magnolia Pet. Co. No. 9 C. C. Banks, Fessendon & Hunter Sur. Set sur. csg. 430 ft.; W.O.C.

Plymouth Oil Co. No. 60-C Welder, sec. 50, Welder Ranch Subd. Set csg. 5,530 ft.; comp. 157.73 B.P.D. on ⅛-in. choke.

Plymouth Oil Co. No. 61-C Welder, sec. 49. Drlg. sh. 1,802 ft.

Plymouth Oil Co. No. 63-C Welder, sec. 50. Sd. 5,525-30 ft.; comp; no gauge.

Plymouth Oil Co. No. 64-C Welder, sec. 71, set surf. csg. 383 ft.; S.D.

Sun Oil Co. No. 3 Rosson, Lot 2, Sec. 35. Drlg. 2,831 ft.

Sun Oil Co. No. 2 Rountree, Blk. 34. Sd. 5,640-58 ft.; swbg. oil and S.W.

Taft Field—San Patricio County

Atlantic Oil Prod. Co. No. 1 Pullin, 40-ac. tr., Lot 4, Blk. 1, 2nd Addn. Loc.

Cage Prod. Co. No. 4 Mayo, 63-ac. tr., Ottman Sur. Sd. 4,929 ft.; testing.

Conroe Drlg. Co. No. 3 Pullin, 44.41-ac. tr., sec. 1, Second Addn. Sd. 4,069-83 ft. completing.

Humble O. & R. Co. No. 8 Mayo, Wm. Burns Sur. Set csg. 3,980 ft.; W.O.C.

Humble O. & R. Co. No. 9 Mayo, 540-ac. tr., Ottman Sur. M.I. rig.

Humble O. & R. Co. No. 10 Mayo, Wm. Burns Sur. T.D. 4,907 ft.; reworking.

Shell Pet. Corp. No. 4 Pullin, Lot 1, Blk. 4, Second Addn. Set surf. csg. 635 ft.; W.O.C.

White Point—San Patricio County

Earl Calloway No. 1 White Point Dev. Co., 330 ft. E line, midway N and S lines C. Seguin Sur. No. 5. Sd. 4,900-73 ft.; ran Schlumberger survey showing sat.; cg. ahead 5,857 ft.

Margo—Starr County

A. A. Kelly No. 1 Gonzales, Sh. 62, Porc. 71. Sd. 346-49½ ft; tested gas. Cg. ahead 362 ft.

J. W. Richards No. 1 Garcia, Sh. 7-B, Porc. 71. Loc.

Rio Grande City—Starr County

Sam Adams No. 1 Garza, Sh. 20-A, Porc. 80. Drlg. 466 ft.

Coreta Oil Co. No. 5 Doyno, Blk. 1, Tr 77-A, Porc. 81. Spudded.

Fech Oil Co. No. 1 Davis, 150 ft. S and W lines, Blk. 15, Tr. 78, Porc. 8. Sd. 1,395-1,400 ft.; attempting comp. on pump.

Moss & Bass No. 3 Doyno, Blk. 3, Tr. 77-A, Porc. 81. R.U.

Carolina-Texas—Webb County

E. J. Sawyer No. 2 Webster, 330 ft. [illegible] line, 1,980 ft. W line, Sur. 684. Tstg. 2,600 ft.

Cole—Webb County

L. H. Sexton No. 1 R. Benavides, Blk. 4, Sur. 22, Cole Subd. R.U.

Lopez—Webb-Duval Counties

C. H. Lewis No. 8 Lopez, Sur. 110. Drlg. 1,821 ft.

Cox & Hamon No. 5 Peal, Sur. 795. T.D. 2,189 ft.; comp. 15 B.P.H.

Cox & Hamon No. 6 Peal, Sur. 796. Sd. 2,187-89 ft.; comp., no gauge.

Cox & Hamon No. 3 Peters, Sur. 327. T.D. 2,130 ft.; comp. 17 B.P.H.

Magnolia Pet. Co. No. 12 Peal, Sur. 382. T.D. 2,131 ft.; comp. 20 B.P.H.

Magnolia Pet. Co. No. 13 Peal, Sur. 382. T.D. 2,164 ft.; comp. 20 P.B.H.

Magnolia Pet. Co. No. 14 Peal, Sur. 383. Sd. 2,111-21 ft.; set csg.; W.O.C.

Mills Bennett Prod. Co. No. 8 M. Lopez, Sur. 73. M.I.M.

Mortimer & Springer No. 6 J. Lopez, Sh. 10-B, Sur. 73. R.U.

Mortimer & Springer No. 4-A Peal, Sur. 72. Sd. 2,122-35 ft.; comp. 15 B.P.H.

Mortimer & Springer No. 3-B Peal, NW¾ Sur. 796. T.D. 2,150 ft.; comp. 20 B.P.H. on ½-in. choke.

Mortimer & Springer No. 5-B Peal, NW¼ Sur. 796. Drlg. 2,067 ft.

Mortimer & Springer No. 6 Paula Vela, Sur. 114. T.D. 2,208 ft.; comp. 15 B.P.H.

Stat [illegible] Co. No. 3 Peal, Sur. 796. Sd. 2,179-81 ft.; comp., no gauge.

Superior Oil Co. No. 10 Billings, Sur. 109, Drk.

Superior Oil Co. No. 1 Kirkpatrick, Sur. 18. T.D. 2,000 ft.; S.D.

O'Hern—Webb County

Hamill & Smith No. 8 Benavides, Blk. 434, Hale Subd. Tstg. sd. 2,916-35 ft.; comp. 572 B.P.D. on ½-in. ck.; sd. 2,922-35 ft.

Magnolia Pet. Co. No. 41 Benavides, Hale Subd. Set csg. 2,751 ft.; W.O.C.

Millican, Clopton & Reed No. 4 S. Benavides, Blk. 248, Hale Subd. Comp. 6 B.P.H. on ⅛-in. ck.; T.D. 2,895 ft.

H. J. Porter No. 1 S. Benavides, Blk. 365, Hale Subd. Sd. 2,871-93 ft.; T.D. 2,897 ft.; comp. 15 B.P.H. on ½-in. ck.

H. J. Porter et al No. 2 S. Benavides, Blk. 386, Hale Subd. Cg. 2,914 ft.

Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173, M.I.M.

Escobas—Zapata County

Texas Co. No. 93 Whitehead, Tr. 1-D, Cerrito Blanco Gr. Drlg. 1,863 ft.

Heye-Claypool, Nixon & Keel Prod. Co. No. 1 Garza, Blk. 11, Zorro Ranch. Sd. 1,240-46 ft.; comp., 25 B.P.D.

Haynes—Zapata County

Clover O. & G. Co. No. 21 Haynes, Villa and Comitas Grs. T.D. 940 ft.; D.&A.

Clover O. & G. Co. No. 22 Haynes, Blk. 7, Haynes Subd. T.D. 950 ft.; comp.; no gauge.

Clover O. & G. Co. No. 23 Haynes, Blk. 7, Haynes Subd. Drlg. 556 ft.

Gilcrease Oil Co. No. 7-B Haynes, 648 ft. SW line, 200 ft. SE line, Villa and Comitas Grs. T.D. 990 ft.; comp. 25 B.P.D.

Gilcrease Oil Co. No. 8-B Haynes, Blk. 4, Haynes Subd. Drlg. 316 ft.

Gilcrease Oil Co. No. 3-C Haynes, Blk. 8, Haynes Subd. T.D. 992 ft.; comp.; 25 B.P.D.

Gilcrease Oil Co. No. 4-C Haynes, Blk. 8, Haynes Subd. Drlg. 645 ft.

McKay & Upchurch No. 11 Haynes, Sur. 7. No report.

Mid-Continent Pet. Corp. No. 5 Haynes, Blk. 8, T.D. 829½ ft.; comp. 18 B.P.D.

Mid-Continent Pet. Corp. No. 6 Haynes, Blk. 8, Haynes Subd. R.U.

Nordan & Morris No. 11-A Haynes, Blk. 7. T.D. 1,041 ft.; comp. 62 B.P.D.

Nordan & Morris No. 12-A Haynes, Blk. 7, Haynes Subd. Set csg. on sd.; W.O.C.

E. C. TEXAS WILDCATS

Anderson County

Neversuch Oil Co. No. 1 John Adams, Long Lake field. Drk.

Angelina County

T. L. Harris No. 1 fee, E line Gilliland Sur., 4½ mi. NE of Huntington. Coring 1,273 ft.

C. D. Neff No. 1 Long Bell Lbr. Co., J. F. Gilbers Sur., 6½ mi. NW of Hunting-ton, S.D. 1,126 ft.

W. A. Stone et al 1 Southern Pine Lbr Co., B. J. Thompson Sur., 8 mi. SE Luf kin. Drk.

Cherokee County

J. G. Mayo No. 1 W. T. James, J. T. Jones Sur. Drlg. 2,772 ft.

Falls County

E. L. Chapman et al No. 1 Grocholski. S.D. 4,114 ft.

R. M. Heffiin No. 1 T. E. Battle, Marl Sur., 3 mi. SW of Marlin. Drlg. 563 ft.

Fannin County

S. W. Ball No. 1 A. G. Byers, 300 ft. N of Schrivner No. 1 Parkhurst, in W. Bailey Sur., 5 mi. N of Leonard. Spd.

Franklin County

R. B. & H. Oil Co. No. 1 Phillips, Wm. Birdwell Sur. Top sd. 4,294 ft.; S.D. 4,-330 ft.

Freestone County

Yancey et al No. 1 Scott, Church Lot, H. Awalt Sur. W of Stewartsville. S.D. 1,500 ft.

Red Lake Oil Co. No. 1 M. Wheeler, 330 ft. S and E of 160-ac. tr., J. I. Aguila Sur., 3 mi. SE of Turlington. Rig.

Henderson County

McDougal et al No. 1 E. Price, M. Mathews Sur., 4 mi. S of Trinidad. S.D. 50 ft.

Sparks et al No. 1 Berry, Young Sur., 5 mi. S of Brownsville, O.W.; to deepen.

Hunt County

Penn Oil Corp. et al No. 1 A. B. Man-ning, 5 mi. NE of Lone Oak, S. Owens Sur. Drk.

Kaufman County

Lester & Duffield No. 1 D. C. Baron, J. T. Taylor Sur., 8 mi. NE of Elmo. Fshg. 5,968 ft.

Nacogdoches County

J. C. Bonhan et al No. 1 Angelina Lbr. Co., in J. Gomez Sur., 14 mi. SE of Naccgdoches. R.U.

Collier et al No. 1 A. T. Mast, 1,000 ft. from S line of lse. and 3,100 ft. from W line of T. J. Lambert Sur. Loc.

Navarro County

Ed Bateman et al No. 1 S. P. Love, 875 ft. from N and 675 ft. from W of 128-ac. tr., R. Good Sur., 3 mi. SW of Corsicana. Drlg. 1,650 ft.

Red River County

Abercrombie & Harrison No. 4 Southern Pine Lbr. Co., D. D. Bruton Sur., 1,500 ft. N of No. 3. Drlg. 1,673 ft.

F. D. Jones et al No. 1 Monkhouse, John Ware Sur. Cg. 1,175 ft.

M. Petroff et al No. 1 R. G. Morris, 600 ft. S and 1,000 ft. E of J. Guest Sur., 2 mi. W of Detroit. S.D. 20 ft.

T. Sneed et al No. 1 Hocker-Hughes. S.D. 2,720 ft.

Robertson County

J. E. Mills No. 1 T. Congelosi, C of 75-ac. tr. in G. A. Nixon Sur., 3½ mi. SW of Hearne. Washing 1,832 ft.

Rusk County

John W. Merritt No. 1 J. A. Stallings, T. Uzzell Sur., 2½ mi. S of East Texas field. S.D. 1,920 ft.

Smith County

Carolyn et al No. 1 Bennett, Robt. Walters Sur., 3 mi. NE of Winona. Drlg. 750 ft.

Upshur County

B. L. Watson No. 1 W. O. Irwin, D. Cannon Sur., NE cor. of county. Drk.

Wood County

G. W. Nix et al No. 1 E. A. Russell, 300 ft. S and 157 ft. E of J. Delap Sur., SW cor. of county. Drk.

EAST TEXAS

(Border Counties)

Bowie County

Woodley & Bentley No. 1 Lumpkin, J. McDermott Sur. Drlg. 3,570 ft.

Cass County

American Liberty No. 1 Dawson et al, on Dawson tr., J. H. Rives Sur. Loc.

American Liberty No. 1 Sheppard, J. H. Rives Sur. Drlg. 1,604 ft.

American Liberty No. 1 J. Wiley, SE cor. 58.86-ac. tr., J. Davenport Sur. Loc.

Bay Oil Co. No. 1 G. E. Parker, SE cor. Greenham Sur. 9-in. set 2,095 ft.; W. O.C.S.

Gulf Prod. Co. No. 1 Dawson et al, NE cor. of tr., J. H. Rives Sur. R.U.

Herman L. Brown No. 7 R. P. Willis, Robt. Trammel Sur. Drlg. 5,680 ft.

H. L. Hunt No. 1 I.N.&C.L. Shelton, SE cor. 202-ac. tr., J. Davenport Sur. Loc.

W. F. Lacey et al No. 2 Baughs, J. H. Rives Sur. Drlg. 5,580 ft.

Magnolia Pet. Co. No. 2 J. E. George, NE cor. John Collum Sur. Cg. 6,056 ft.

Magnolia Pet. Co. No. 3 J. E. George, SW cor. John Collum Sur. Cg. 6,070 ft.

Magnolia Pet. Co. No. 4 J. E. George, NE cor. 141-ac. lse., John Collum Sur. Drlg. 4,773 ft.

Magnolia No. 5 J. E. George, SW cor. John Collum Sur. Loc.

Magnolia No. 6 J. E. George, SW cor. John Collum Sur. Loc.

Magnolia No. 7 J. E. George, SE cor. John Collum Sur. Loc.

Magnolia No. 8 J. E. George, SE cor. John Collum Sur. Loc.

Magnolia No. 1 Meda Green, SW cor. J. Davenport Sur. Loc.

Magnolia No. 2 Meda Green, SW cor. J. Davenport Sur. Drk.

Magnolia No. 4 Meda Green, on Jesse Baugus 60-ac. tr., J. Davenport Sur. Loc.

Magnolia Pet. Co. No. 4 A. S. Hall, J. Collom Sur., 544 ft. S of N line, 1,250 ft. E of W lines, E. E. Hall tr. Comp.; flw. 20 B.P.H.; ¼-in. tbg. ck.; T.D. 6,-090 ft.

Magnolia Pet. Co. No. 5 A. S. Hall, J. Collom Sur., 532 ft. S of N line and 440 ft. W of E line of E. E. Hall 60-ac. tr. Comp.; flw. 22 B.P.H.; ¼-in. tbg. ck.; T.D. 6,070 ft.

Magnolia Pet. Co. No. 7, NW cor. 60-ac. lse., John Collum Sur. Comp.; flw. 23 B.P.H.; ¼-in. tbg. ck.; T.D. 6,070 ft.

Magnolia No. 8 A. S. Hall, SE cor. James Young Sur. Loc.

Magnolia Pet. Co. No. 2 W. M. Hall, SE

cor. Wilson Robinson Sur. Comp.; flw. 30 B.P.H.; ¾-in. tbg. ck.; T.D. 6,083 ft.

Magnolia Pet. Co. No. 4 Haywood, SW cor. Haywood Tr., John Collum Sur Fsg. D.S. 5,960 ft.

Magnolia Pet. Co. No. 1 J. J. Moore, J Collum Sur., 330 ft. N. 418 ft. W. SE cor. 118-ac. tr. 7-in. cmt. 6,047 ft.; T.D. 6,051 ft.; W.O.C.S.

Magnolia No. 1 Noel Estate, NE cor. Wm. B. Hughes Sur. Drk.

Magnolia Pet. Co. No. 3 Rives, NE cor John Collum Sur. Comp.; flw. 12 B.P.H.; ⅝-in. tbg. ck.; T.D. 6,068 ft.

Magnolia Pet. Co. No. 4 Rives, NE cor John Collum Sur. Comp.; flw. 12 B.P.H.; 3/16-in. tbg. ck.; T.D. 6,047 ft.

Magnolia Pet. Co. No. 5 Rives, SE cor. John Collum Sur. Drlg. 3,440 ft.

Magnolia No. 6 Rives, SW cor. 425-ac. tr., Robert Trammel Sur. 16-in. cmt. 235 ft.; W.O.C.S.

Magnolia No. 7 Rives, NE cor. John Collum Sur. Loc.

Magnolia No. 8 Rives, NE cor. John Collum Sur. Loc.

Magnolia No. 9 Rives, NE cor. John Collum Sur. Loc.

Marathon Oil Co. No. 2 R. P. Willis, 1,03: ft. S of No. 1, S.F.I.W. Sur. 7-in. cmt. 5,961 ft.; T.D. 5,984 ft.; W.O.C.S.

Marathon Oil Co. No. 3 R. P. Willis, 660 ft. S of Superior A-1 Chew, S.F.I.W. Sur Drlg. 5,565 ft.

R. W. Norton No. 3 A. S. Hall, NW cor E. E. Hill 60-ac., John Collum Sur 2,000 gals. acid; tstd. 5,000,000 ft. gas; S.D.; will run short string 5-in.

R. W. Norton No. 2 J. T. Moore, 940 ft. W of No. 1, Wm. R. Myers Sur. Drk.

Ohio Oil Co. No. 4 R. P. Willis, S.F.I.W. Sur. Drk.

Ohio Oil Co. No. 5 R. P. Willis, S.F.I.W. No. 1263 Sur. Loc.

Ohio Oil Co. No. 6 R. P. Willis, 1,226 ft. SE of No. 2, S.F.I.W. No. 1263 Sur. Drk.

Ohio Oil Co. No. 7 R. P. Willis, S.F.I.W. No. 1263 Sur. Loc.

Ohio Oil Co. No. 10 R. P. Willis, 933 ft. S of No. 4, S.F.I.W. No. 1263 Sur. Drk.

Phillips Pet. Co. No. 1 G. E. George, Wm. R. Myers Sur. Location.

Phillips Pet. Co. No. 1 Skinner, Hutchinson tr., S.F.I.W. No. 1025 Sur. Loc.

Phillips Pet. Co. No. 2 Skinner, Hutchinson tr., S.F.I.W. No. 1025 Sur. Loc.

Phillips Pet. Co. No. 1 Wartzbaugh, Robt Trammel Sur., 431 ft. S of N line and 490 ft. W of E line. Drlg. 5,319 ft.

Phillips Pet. Co. No. 2 Wartzbaugh, Robt Trammel Sur., 134 ft. S of N line and 486 ft. W of E line. Drlg. 5,440 ft.

Phillips Pet. Co. No. 3 Wartzbaugh, 438 ft. N and midway between E and W line of lse., Robt. Trammel Sur. Drlg. 2,319 ft.

Showers & Moncrief No. 5 T.H. and Sallie Stalcup, Robt. Trammel Sur. Drk.

Showers & Moncrief No. 6 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. S and 1,338 ft. W line, Loc.

Showers & Moncrief No. 8 T. D. and Sallie Stalcup, Robt. Trammel Sur., midway between E and W line of lse. Loc.

Superior Oil Co. No. A-3 Chew, Robt. Trammel Sur., 1,399 ft. N, 466 ft W SE cor. 108-ac. tr. 7-in. cmt. 5,930 ft.; T.D. 5,987 ft.

Superior Oil Co. No. A-4 Chew, 1,263 ft N, 466 ft. E. of SW cor 108-ac. tr Flw. 17 B.P.H.; ¼-in. tbg. ck.; T.D. 5,992 ft.

Superior Oil No. 5-A Chew, W.D.&C.C Track, Robt. Trammel Sur. Drlg. 2,400 ft.

Superior Oil No. 6-A, SW cor. Chew tr., Robt. Trammel Sur. Drlg. 5,740 ft.

Texas Co. No. 2 E. E. Hall, SW cor. 60-ac. tr., James Young Sur. 7-in. cmt. 6,035 ft.; T.D. 6,087 ft.; W.O.C.S.

Texas Co. No. 1 W. M. Hall, A. Archer Sur. Drlg. 2,700 ft.

Tide Water No. 1 W. D. Chew, Robt. Trammel Sur., 150 ft. N of S line, midway between E and W lines of 20-ac. lease. Derrick.

Tide Water No. 1 W. D. Chew, on 55-ac. tr., Robt. Trammel Sur. Drlg. 5,322 ft.

Tide Water No. 2 C. C. Chew, Robt Trammel Sur., 20-ac. tr. Drlg. 5,989 ft.

Tide Water No. 2 C. C. Chew, on 55-ac. tr., Robt Trammel Sur. R.U.

Statement of the Ownership, Management, Etc., of

THE OIL AND GAS JOURNAL

October 1, 1936

(This statement is published in compliance with the Act of August 24, 1912).

Published weekly (Thursday) at Tulsa, Okla.

Publisher: The Petroleum Publishing Company, Tulsa, Okla.

Editor: C. O. Willson, Tulsa, Okla.

Managing Editor: W. T. Anderson Tulsa, Okla.

Business Manager: S. H. Rourke, Tulsa, Okla.

Stockholders holding 1 per cent or more of total amount of stock: Helen B. Lauinger, Tulsa, Okla.; Edward R. Boyle, Oil City, Pa.; Edward P. Boyle, Oil City, Pa.; Estate of Jennie B. Egan, Oil City, Pa.

Known bondholders, mortgagees and other security holders holding 1 per cent or more of the total amount of bonds, mortgages or other securities: None.

S. H. ROURKE,
Business Manager.

Sworn to and subscribed before me this 25th day of September, 1936.

H. R. BARNETT.
Notary Public.

My commission expires October 3, 1937.

United Prod. Co. No. 3 J. R. Jones, Ben J. Murray Sur. Loc.

United Gas No. 4 J. R. Jones, 502 ft. N, 3,-420 ft. W, SE cor. Ben J. Murray Sur. Cg. 5,890 ft.

United Gas No. 5 J. R. Jones on 18-ac. tr., John Collum Sur. Drlg. 5,308 ft.

United Prod. Co. No. 4 F. S. Simpson, on 160-ac. tr., James Young Sur. Drlg. 5,-251 ft.

United Prod. Co. No. 6 J. T. Stewart, John Collom Sur., 330 ft. S of N line and E of W line of Mack & Stewart 81.9 ac. Comp.; flw. 32 B.P.H.; ½-in. tbg. ck.; T.D. 6,040 ft.

United Prod. Co. No. 7 J. T. Stewart, M. Stewart 40-ac. lse., John Collum Sur. Loc.

United Prod. Co. No. 1-A J. T. Wall, Alex Archer Sur. on Wall 82-ac. tr. 9-in. cmt. 2,192 ft.; T.D. 2,215 ft.; W.O.C.S.

United Prod. Co. No. 2-A J. T. Wall, Alex Archer Sur. on Wall 82-ac. tr. Drlg. 1,-681 ft.

Harrison County

W. F. Bridewell et al No. 1 Clapp, F. C Baker Sur. T.D. 5,000 ft.; tstg.

Geyer Oil Co. No. 2-A Vincent, S. B. Harrison Sur. Drlg. 1,500 ft.

Hanover, Bergendoll et al No. 1 Buchanan, Wm. McIlvain Sur. Drlg. 4,200 ft.

Panola County

Danciger O. & R. Corp. No. 1 Tatum, SW cor. A. Bissell Sur. Digging pits. Loc

A. C. Glassell No. 1 Frost Lbr. Industries SW cor. Mary S. Potts Sur. Drlg. 5,-857 ft.

Gulf Oil Corp. No. 1 Pierce & Chesbro, J. H. Shahan Sur. Drlg. 4,886 ft.

Logansport P. L. Corp. No. 1 Rushing, M Smith Sur. Show 2,582-2,600 ft.; T.D. 2,710 ft.; S.D.

Magnolia Pet. Co. No. 1 E. A. Hull, T. Applewhite Sur. R.U.

Sabine County

L. D. House et al No. 1 Bell, McDonnell Sur. Cg. 2,032 ft.

Shelby County

F. E. Mulroy et al No. 1 C. A. Hayden, in the D.T.F. York Sur. Fsg. 2,200 ft.

Potter & Rubeling G. H. Polly No. 1, Wm. Wisner Sur. T.D. 4,050 ft.; M.I.H.R.

Red Wing Oil Co. No. 1 C. H. Herton, 54- ac. tr. in J. Dowlin Sur. Drlg. 2,050 ft.

NORTH TEXAS WILDCATS

Archer County

Archer Drlg. Co. No. 1 A. L. Harris, Blk. 60, Harris Subd. Location.

Archer Drlg. Co. No. 1 L. F. Wilson, sec. 32, A.T.N.C.L. Sur. Loc.

Clark & Mayfield No. 1 W. H. Taylor, sec. 17, A.T.N.C.L. Sur. Spudded.

F. E. Haynes No. 1 Coleman, Blk. 46, Brazos CSL A-18. Drlg. 2,059 ft.

W. W. Houston No. 1 P. J. Forcher, sec. 13, H.&T.C. Sur. Loc.

Luggenheim et al No. 1 W. T. Waggoner, sec. 3, H.&T.C. Sur. Drlg. 1,310 ft.

Rathke Oil Co., No. 1 G. P. Meade, sec. 39, "L.&M." pasture. R.U.R.

Clay County

Alexander & Goldsmith No. 1 Byers & Co., sec. 28, Byers Subd. Drk.

Collin County

California Consld. Oil Co. No. 1 Fagg, Jas. Rutherford Sur. Spud and S.D.; wtr.

Port Bolivar O. & R. Co. No. 1 Durning, Wm. Creegar Sur. S.D. 4,065 ft.

Port Bolivar O. & R. Co. No. 1 A. Sherley, G. Starke Sur. Loc.

Sorrell et al No. 1 D. R. Clark, J. Rowland Sur. Drk.

Cooke County

Cain & Chandler No. 1 J. B. Burch, J. M. Williams Sur. A-658. S.D. 1,956 ft.

R. W. Fails No. 2 Powell, Wm. McClelland Sur. A-752. 6⅝-in. cmt. 1,338 ft.; W.O.C., S.S.O. 1,338-62 ft.

Gratz & Wilson No. 1 Dennis, S. Hernandez Sur. A-437. Loc.

B. H. Hilburn No. 1 W. A. Harris, J. Harris Sur. A-502. U.R. 10-in., 375 ft.

Long & Wolf No. 1 Hopkins, B.B.B.&C Sur. A-150. Running 8¼-in. to 1,325 ft.

Nair Oil Corp. No. 1 England, J. C. McElroy A-711. S.D. to standardize.

Reed et al No. 1 V. D. Randall, J. Redman Sur. Set 8¼-in. 2,502 ft.; cem. and W.O.C. R.U.S to drill plug.

E. R. Robison No. 1 J. Krebs, H. Wilkey Sur. A-1,090. S.D. 2,130 ft.

Ruwaldt-Couch No. 1 Stacy, J. Clark A-194. Drlg. 1,080 ft.

Sinclair Prairie Oil Co. et al No. 2 A. C McCall, H. White Sur. A-1,134. Drlg 5,040 ft.

Skelly Oil Co. No. 1 Field & Bowers, J. Dye Sur. A-340. Spudded 30 ft. and S.D.

Wertheimer et al No. 1 W. A. Erwin, J Armendaris Sur. A-1,234. S.D. 1,229 ft.

Denton County

Manning & Moore No. 1 E. L. Darnell, F. Walters Sur. A-1,329. Moving in machine to swab out hole.

Grayson County

Pete Shaner No. 1 Blair, R. H. Deavers Sur. A-313. S.D. 2,000 ft.; repairs.

Jack County

Bryson O. & G. Co. No. 1 O. Loving, T.& N.O. Sur. A-852. Loc.

W. H. Hammon No. 1 G. E. Evett, H. Plaster Sur. Drlg. 1,825 ft.

Harper Pet. Corp. No. 1 G. F. Brown, S. M. Holderness Sur. A-1,532. S.D. 1,700 ft.

L. A. Long No. 1 Smith, S.P.R.R. Sur. A-552. Drlg. 2,190 ft.

Mullendore et al No. 1 Mrs. D. C. Clayton, L. Knight Sur. A-324, testing sd. 2,943-3,002 ft.

States Oil Corp. No. 1 J. Lowe, J. Hughson Sur. A-256. S.D. 3,470 ft.

Joe A. Worsham No. 1 Lowe, S. Crook Sur. A-148. T.D. 3,135 ft.; S.D.O.

Montague County

H. Bost No. 1 Lemon, S. Little A-417 Machine on ground.

Clark-Beckner No. 1 C. W. Bell, sec. 4 M.E.P.&P. Sur. Drk.

T. P. Frost No. 1 Johnson, sec. 6, E.T R.R. Spudded and S.D.

W. E. Halbert No. 1 Petty, S. A. Southerland A-992. Spud. and S.D.

L. C. Heydrick No. 1 Cliff Dowd, G. W. Browning Sur. A-1,274. Spud. & S.D.

Jim Seeds et al No. 1 Coombs, sec. 55 M.E.P.&P. Sur. S.D.O. 2,340 ft.

Sinclair Prairie et al No. 2 C. Holt, Blk. 45, K.C.S.L. Sur. O.S. 1,697-1,705 ft.; pumping 25 bbls. per day.

Thompson et al No. 1 John W. Holmes, Jas. B. Miller Sur. A-461. Drlg. 1,590 ft.

Wichita County

A. E. Blair No. 1 Cody Est., sec. 311, Wagoner Col. Subd. R.U.R.

W. F. Hamilton No. 1 W. T. Waggoner, S. Holloway Sur. A-533. S.D. 1,990 ft.

Melat & Graham No. 1 Munger, Blk. 25 K.W.V.F.V. Sur. 6⅝-in. set 3,707 ft.; Drlg. plug.

G. H. Howell No. 1 Foster, sec. 1, H.T. & B. Sur., 900 ft. S.D. water

J. M. Morton No. 1 Housler, J. C. Pike A-509 S.D. 3,142 ft.

Sussex Oil Co. No. 1 L. O. Saunders, Blk. 7, Caudrilla I.R.R. Sur. A-352. S.S.O.; drlg. 1,867-70 ft.

Wilbarger County

Fain McGaha No. 2 N. N. Waggoner, sec. 37, H.&T.C. Sur., Blk. 4. Drlg. 1,875 ft.

F. A. Lain No. 1 Mrs. D. Coffee, sec. 44, H.&T.C. Sur., Blk. 15. S.D. 1,250 ft. titles.

Webb & Stilley No. 1 F. Waggoner, sec. 33, H.&T.C. Sur., Blk. 4. Location.

Young County

S. Caprito No. 1 Mrs. N. Laquey, A. Irvin Sur. A-1779. 6⅝-in. casing cemented at 3,738 ft.

Art Cox No. 1 J. T. Rogers, J. Ray D. 1,628. Running 53/16-in. to 3,989 ft.

W. D. Eastland No. 1 A. R. Manning, F. & L. Sur. 3,412. Drlg. 2,720 ft.; O.S. 2,727-40 ft.; 200 ft. oil in hole; C.O. and testing.

Hinson & Tidwell No. 1 Jeffery, T.E.&L. Sur., sec. 467. Drlg. 1,025 ft.

Rathke Oil Co. No. 1 O. W. Hill, J. Graham Sur. A-122. Flowing 50 bbls. per hour after acid.

Yorktex Pet. Co. No. 1 F. G. Burnett, G. W. Hills Sur. A-151. Drlg. 3,550 ft.

WEST TEXAS WILDCATS

Andrews County

Grisham Hunter Corp. No. 1 Ratliff & Bedford. Drlg. 2,900 ft.

R. H. Henderson No. 1 J. E. Parker, sec. 25, P.S.L. Sur. A-43. Drlg. 75 ft.

Borden County

Moore Bros. No. 1 Clayton-Johnson, sec. 20 Blk. 32, Twp. 4n, T.&P. Sur. Top Yates 1,660 ft.; top salt 1,175 ft.; drlg. 2-215 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd sec. 66, Blk. 10, G.H.&S.A. Sur. Drlg. 3,443 ft.

Toney Hess No. 1 Mary Deal, sec. 7, Blk. 1, G.T.R.R. Sur., 7 mi. NW of Marathon. S.D. 1,630 ft.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 B B Duggan, cen. Labour 13, League 55 Oldham County Sch. Ld. Drlg. 4,232 ft.

Crane County

Gulf Oil Corp. No. 2 W. N. Waddell, sec. 18, Blk. B-21. Drlg. 6,143 ft.

Gulf Oil Corp. No. 2 Tubbs, sec. 12, Blk 27-B. Shut in 4,391 ft.; 224 bbls. first 2 hrs. S.D. for repairs.

Gulf Oil Corp. No. 2 McKnight, sec. 5 Blk. B-21. Drlg. 3,515 ft.

I. [illegible] Bros. No. 2 Tubbs, sec. 9, B-27 T.D. 4,321 ft.; S.D. for repairs.

W. [illegible] 32, P.S.L. Sur. T.D. 5,626 ft. in lime; hole full of sulfur wtr.

Dawson County

Roy Albaugh et al No. 1 J. Robinson, T.D 4,971 ft.; no increase in oil; S.D.O.

Ector County

Continental Oil Co. No. 1 Edwards, sec. 32, Blk. 44, T.&P. Sur. Drlg. 3,001 ft.

Empire G. & F. Co. No. 1-C Cummins, sec 22, Blk. 45, Twp. 1n, T.&P. Sur. Drlg 2,958 ft.

Sinclair Prairie No. 1-A Johnson, sec. 42 Blk. 42, Twp. 1s, T.&P. Sur. Drlg. 3,-400 ft.

Stanolind O. & G. Co. No. 2-B Cowden, sec. 10, Blk. 43, Twp. 2s, T.&P. Sur Set csg. 3,895 ft.; W.O.C.

York & Harper No. 1 Slater, sec. 26, Blk 45, Twp. 1s, T.&P. Sur. Fsg. 3,712 ft.

York & Harper No. 1 York, H.F.W. 3,836-37 ft.; set csg. 3,867 ft.; drlg. and testing for wtr. shutoff.

Edwards County

M. I. Phillips & Miers No. 1 Turney, sec 164, C.C.S.D.&R.G.N.G. Sur. Drlg. 741 ft.

Plateau Oil Co. No. 1 Hatch, C SE SW¼ sec. 66, Blk. B, H.E.&W.T. Sur. Drlg. 1,175 ft.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless Drlg. 1,175 ft.

Ellis & Wilbanks No. 1 C. C. Wourland, sec. 15, Blk. 21, T.&P. Sur. T.D. 3,309 ft.; U.R. csg.

Forest Dev. Co. No. 1 A. M. Dry, sec 108, Blk. 2, H.&T.C. Sur. T.D. 4,979 ft.; S.D.

Gaines County

Amerada Pet. Corp. No. 1-A Averitt, sec 228, Blk. G, W.T.R.R. Sur. Drk.

Humble O. & R. Co. No. 1 W. Eubanks, sec. 6, Blk. AX. T.D. 6,192 ft.; D.&A.

Garza County

Gartex Oil Co. No. 2 Post Est., sec. 6, Blk 5, K. Aycock Sur. Drlg. 1,970 ft.

Glasscock County

California-Honolulu Oil Corp. No. 1 Calverley, sec. 25, Blk. 35, Twp. 3s, T.&P. Sur. T.D. 2,571 ft.; S.D.

F. Dodson et al No. 1 Carter heirs, sec 5 Blk. 33, Twp. 3s, T.&P. Sur. Drlg. 2,669 ft.; bailed 3½ bbls., mostly sulfur wtr.

Hockley County

Texas Co. No. 1 B. Slaughter, Labour 83 League 38, Zavala Co. Sch. Lds. Drlg 2,765 ft.

Hudspeth County

Hayman Krupp Oil & Land Co. No. 1 Thaxton, sec. 34, Blk. 74, Twp. 6, T.&P. Sur. S.D. 1,476 ft.

Jones County

Archer Drlg. Co. No. 1 Berryhill, Lot 7 J. Moore Sur. No. 1. Wtr. sd. 2,115-18 ft.; H.F.W. and S.D.

Camp & Grady No. 1 Woodson. Drlg. 1, 658 ft.

R. B. Ferris et al No. 1 Guitar, trustee sec. 44, Blk. 15, T.&P. Sur., 1 mi. NE of Hawley. Drlg. 1,266 ft.

P. E. Glenn No. 1 Carlton, Subd. 26, McMullen & McGloin Sur. Pits.

Humphrey No. 1 Rushing, sec. 11, G. Martinez Sur. H.F.W. 2,625-37 ft.; S.D.

H. C. Owens et al No. 1 H. Arnwine, N½ sec. 69, B.B.B.&C. Sur. S.D. 634 ft.

Parker No. 1 C. L. Brown, sec. 9, Blk. 2, T.&N.O. Sur. T.D. 2,448 ft.; D.&A.

L. H. Pearson No. 1 Guitar, 412 ft. N and 400 ft. W of SW¼ sec. 23, Blk. 74, T.&P. Sur. Loc.

J. L. Reeves No. 1 Kelly, C. Martinez Sur., 1½ mi. N of Hawley. Drlg. 770 ft.

Kimble County

Wilcox O. & G. Co. No. 1 H. Spiller, sec 15, Brooks & Burleson Sur., Abst. 80. Drlg. 2,001 ft. in lime.

Pecos County

Aero O. & G. Co. No. 1 Bloydes, sec. 50, Blk. 10, H.&G.N. Sur. S.D. 1,300 ft.

Anderson Oil Co. No. 1 White & Baker, sec. 32, Blk. Z, T.C. Sur. Drlg. 1,205 ft.

Cardinal Oil Co. No. 1 White & Baker sec. 37, Blk. Z, T.C.R.R. Sur. T.D. 1,160 ft.; fsg.

C. A. Everitt No. 1 W. C. Tyrell, sec. 508, G. Montez & Duran Sur. Drlg. 532 ft.

Kirk et al No. 1 Potts, sec. 6, Blk. 9, H.& G.N. Sur. Drlg. 156 ft.

E. R. Minshall, No. 1 Banker, sec. 25, Blk. 146, T.&St.L. Sur. Drlg. 1,870 ft.

Tex-Mex Oil Co. No. 1 McKee, Tr. 7, sec. 24, Blk. 9, H.&G.N. Sur. Set csg.; drlg. 2,240 ft.

[illegible] Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. 2,-870 ft.

Trans-Pecos Oil Co. No. 2 Caldwell, 330 ft. S and 730 ft. E, sec. 27, Blk. 50, T.&P. Sur. Drlg. 150 ft.

Presidio County

Lindeman Bros. Oil Corp. No. 1 J. R. Gladsoe & Badgley, sec. 15, Blk. 351, G.C.&S.F. R.R. Co. Sur., 2½ mi. NE of Presidio. T.D. 1,660 ft.; C.O. 20 ft. off bottom.

Schleicher County

J. W. Cooper No. 2-B Page, sec. 40, Blk. L, G.C.&S.F. Sur. Cellar.

Magnus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell, grantee. Elev. 2,209 ft.; S.G. 4,350 ft.; gas sd. 4,956-58 ft.; T.D. 6,527 ft.; P.B to 5,779 ft.; S.D.

Terrell County

Ohio Oil Co. No. 1 M. H. Goode, sec. 26, Blk. 161, G.C.&S.F. Sur. O.T.D. 6,120 ft.; preparing to deepen to Ordovician.

Terry County

J. A. Estes No. 1 F. B. Graham, sec. 23, Blk. T, O.&W.R.R. Sur. S.D. 70 ft.

Uscan Oil Co. No. 1 Brownfield, C N¼ sec. 54, Blk. K, P.S.L. Sur. Drlg. 2,232 ft.

Upton County

R. H. Henderson No. 1 Reese, sec. 16, Blk. 3½, C.C.S.D.&R.G.N.G. Sur. T.D. 373 ft.; fsg.

Fred Hogan et al No. 1 R. H. Harris et al sec. 3, Blk. W, G.C.&S.F. Sur. Drlg. 410 ft.

Ward County

P. Moran et al No. 1 Reynolds, sec. 13, Blk. 5, H.&T.C. Sur. S.D. 850 ft.

C. H. Mahres No. 1 P. Wilson, Drlg. 1,-425 ft. in Anhy.

Prince Bros. Drlg. Co. No. 1 Monroe, 330 ft. SW and SE, sec. 52, Blk. 34, H.&T.C. Sur. Drlg. 820 ft.

Texas Pacific C. & O. Co. et al No. 1 Buckner Orphans Home Lands, sec. 3, Blk. 32, H.&T.C. Sur. Drlg. 1,783 ft.

East and East Central Texas

By
L. E. BREDBERG

EASTERN TEXAS CONTINUES TO ATTRACT WILDCATTERS

DALLAS, Tex., Sept. 28.—Seven wildcat locations were reported in the East Texas district this week, more new wildcat activity than has been reported in a long time in that district.

Five dry holes were abandoned, all Woodbine sand tests except the Limestone County well of C. L. Lytle and others on the J. L. Thompson lands in the old Mexia field. This test gave indications of being a Trinity sand producer, but failed to make oil in commercial quantity. Water proved its ruin. Total depth was 6,059 feet and elevation 549 feet.

The wildcat test of the Atex Oil Co. on the H. L. Wyatt lands, south of Chandler in Henderson County, one of the more important tests recently drilled in the district, was given up as a failure at a total depth of 4,932 feet. Elevation is 346 feet. Two shallow tests were abandoned in Fannin and one in McLennan County.

Wildcat Locations

Sam W. Ball spudded a wildcat this week on the A. G. Byers farm, W. Bailey Survey, Fannin County, 300 feet north of a test abandoned in the past week at 1,322 feet. The new test is about 3 miles south of Trenton.

A test of importance is to be sunk in the Red Lake area, 3 miles south of Turlington, Freestone County, 1½ miles northeast of the two gassers on the Ball lands in the Aguilera Survey. The Red Lake Oil Co. is to put this well down on the M. Wheeler lands in the same survey, and has the rig up. A couple of dry holes have been drilled in the area.

A wildcat location was staked by Collier and others on the A. T. Mast farm in the T. J. Lambert Survey in Nacogdoches County and one was staked in Navarro County, with another getting under way this week in quest of Trinity production. The latter test is being drilled by Ed Bateman and others on the S. P. Lane lands, in the R. Good Survey, 3 miles southwest of Corsicana. It is drilling below 1,650 feet. The other location is 1 mile south of Bazzette and is to be drilled by Tom Sharpe and others on the E. Black lands in the B. G. Bolthorpe Survey.

Red River County, in which several dry holes have been abandoned during the past 12 months, and in which considerable wildcatting is now taking place or is being planned, received another starter this week when M. Petroff and others spudded in No. 1 R. G. Norris in the J. Guest Survey, 2 miles south of Detroit.

In the southwest corner of Wood County, G. W. Nix and associates are to drill a wildcat and have derrick up on the E. A. Russell farm, J. Delap Survey. Another test is expected to be drilled on the J. W. Fletcher lands in the William Clark Survey, Rusk County, with the probability that a test will be sunk east of Gilmer in Upshur County on a block of 2,500 acres assembled by J. R. Reed.

In Kaufman County, Scott and Woodside of Dallas have reassembled approximately 8,000 acres centering in and around the Juan C. Cortex Survey, and have made tentative location for a 5,000-foot, Trinity test, on the Wood lands in the T. Nash Survey, 1 mile east of Scurry. A former test was drilled in the A. Cherino Survey, in this area and abandoned at 2,510 feet in June, this year.

Talco Field

Lack of water will probably no longer retard development in the Talco pool as two water companies now transport water through pipe lines from outside sources, and recent heavy rains have restocked depleted tanks and lakes and have raised creeks and rivers in the area.

One test drilled in the Talco townsite was abandoned this week after proving dry at 4,367 feet. Combs and others sank this test on the Felix Jones lot, center of Lot 2, Block 21. It did not cut the fault or find the Paluxy formation, consequently appears as a north edge definer in this particular part of the field.

Refinery Planned

A $300,000 refinery is contemplated for the Talco field and the 65-mile 8-inch line from the Longview station of the Humble Pipe Line Co., now under construction, is expected to be completed near the middle of October. This will give the field its first pipe line outlet. The refinery may be erected at Mount Pleasant, 18 miles to the southeast on the main line of the St.L.&S.F Railway, and if so about 14 miles of line will have to be laid from the field to the refinery. The Talco Pipe Line Co., headed by Capt. J. F. Lucey, D. Harold Byrd and Ralph E. Fair, may unite with other independents in building the plant, this pipe line company now being connected to 20 wells in the field, including some wells of their own.

Eight oil wells were completed in the field in the past week, one of which showed 10 per cent salt water when it came in, and four of the eight making only pumpers. All were on the Titus County side of the field.

Gas in Use

The Athens Natural Gas Co. has completed its 16-mile 4-inch gas line from the Cayuga field in northwestern Anderson County to Athens and is already supplying gas to the Athens Brick & Tile Co., and will also supply the Athens Cotton Oil Mill Co. and other commercial gas users in the city. Gas for domestic consumption is being furnished by another company. Homes and commercial houses at Crossroads, located on the line's route, will also take gas from the Athens line.

Distillate Well

The second Trinity sand producer in the Cayuga field, northwestern Anderson County, Seaboard and Tide Water Oil Co. No. 15 Edens, located in the S. Snyder Survey, has been completed, about 2½ miles southwest of the first Trinity sand test in the field, which proved a distillate producer and the first Trinity well completed in the district. On an eight-hour test it flowed 16 bbls. of 62.5 gravity distillate with 11,925,000 feet of gas through one-quarter and one-eighth inch tubing chokes and one-half and three-eighths inch casing chokes at a total depth of 7,570 feet. The 7-inch oil string was cemented at 7,364 feet.

Deep Test

Lester and others' deep test, located on the D. C. Baron lands, in the J. T. Taylor Survey, 8 miles northeast of Elmo, in Kaufman County, is still fishing at 5,968 feet. It is to be carried 500 feet deeper to the Glen Rose as soon as the fishing job is completed.

MISCELLANEOUS COMPLETIONS IN EAST TEXAS

Titus County

Byers and Stevens No. 1 L. Blackburn, total depth 4,305 feet, 87 bbls. per hour. W. B. Hinton and others No. 2-B Carr, total depth 4,325 feet, 8 bbls. per hour. Humble Oil & Refining Co. No. 2 Davis, total depth 4,322 feet, 93 bbls. in 24 hours on pump; No. 14 King and Hughes, total depth 4,320 feet, 160 bbls. in 20 hours through one-quarter inch choke; No. 1 Monning Dry Goods Co., total depth 4,294 feet, 292 bbls. in 24 hours through one-quarter inch choke. Luse and Fosdick No. 1 Nugent, total depth 4,335 feet, 180 bbls. in 24 hours on pump. Nivla Oil Corp. No. 1 Wyatt, total depth 4,350 feet, 353 bbls. in 24 hours on pump, 10 per cent salt water. Roberts Drilling Co. No. 1 Sims, total depth 4,345 feet, 185 bbls. in 24 hours on pump.

Fannin County

Schrivner-Clower No. 1 E. Parkhurst, dry and abandoned 1,322 feet, 3 miles south of Trenton. Styles-Smith No. 1 R. Stewman, dry and abandoned 520 feet, 2 miles southeast of Trenton.

Henderson County

Atex Oil Co. No. 1 H. L. Wyatt, dry and abandoned 4,932 feet, elevation 346 feet, south of Chandler.

Limestone County

C. L. Lytle No. 2 J. L. Thompson, dry and abandoned 6,059 feet, elevation 549 feet, in Mexia field.

McLennan County

Mack Reeves and others No. 1 C. Tubbs, dry and abandoned, 1,115 feet, 5 miles northwest of Crawford.

East Texas Field

Gregg County

Arkansas Fuel Oil Co. No. 5 Davis, 3,584-95 feet, 13 bbls. in 15 minutes. Hester and Silvey No. 3 Branson, 3,561-63 feet, 20 bbls. in four hours on pump. T. D. Humphreys No. 3 Baker, 3,656-3,670 feet, 35 bbls. in 24 hours on air lift. L. & G. Oil Co. No. 2 Lee, 3,569-92 feet, 39 bbls. in two hours on pump. Magnolia Petroleum Co. No. 18 Hineman, 3,645-60 feet, 80 bbls. per hour. Stanolind Oil & Gas Co. No. 11 Castleberry, 3,571-98 feet, 8 bbls. in 15 minutes; No. 11 Smith, 3,550-75 feet, 16 bbls. in 15 minutes; No. 11 Stephens, 3,558-3,618 feet, 22 bbls. in 30 minutes; No. 13 McGeorge, 3,457-92 feet, 20 bbls. in 24 minutes. Sun Oil Co. No. 31 Haynes, 3,588-3,635 feet, 32 bbls. in 30 minutes.

United East & West Oil Co. No. 9 Walker, 3,603-07 feet, 95 bbls. per hour. Davis & Hart No. 2 Crews, dry and abandoned 3,754 feet. Gulf Oil Corp. No. 45 Brown, 3,626-44 feet, 20 bbls. in 19 minutes; No. 19 Still, 3,571-98 feet, 25 bbls. per hour on swab. Humble Oil & Refining Co. No. 20 Knowles, 3,546-3,611 feet, 80 bbls. per hour. Volunteer Development Co. No. 1 Still, 3,496-3,552 feet, 20 bbls. in four hours on pump. Roger Lacey No. 3 Douglas, 3,565-78 feet, 95 bbls. per hour. Lee & Williams No. 5 Carter, 3,603-04 feet, 20 bbls. per hour. Rozell Oil Corp. No. 2-C Still, 3,520-56 feet, 20 bbls. in eight hours on swab. Sinclair Prairie Oil Co. No. 10-B King, 3,412-13 feet, 23 bbls. in 15 minutes. Sun Ol Co. No. 23 Beall, 3,617-32 feet, 45 bbls. per hour; No. 35 Cole, 3,524-44 feet, 63 bbls. per hour. Tauble & Lyons No. 6-B Richards, dry and abandoned 3,562 feet.

Rusk County

Gulf Oil Corp. No. 12 Griffin, 3,598-3,606 feet, 80 bbls. per hour; No. 19 Sexton, 3,608-80 feet, 30 bbls. per hour through three-quarters inch choke. Magnolia Petroleum Co. No. 16 Moore, 3,679-85 feet, 16 bbls. in 15 minutes; No. 14 Still, 3,646-85 feet, 20 bbls. in 30 minutes through 1-inch choke. C. L. Archer No. 2 Stewart, 3,761-62 feet, 25 bbls.

(Continued on Page 102)

West and North Texas

By
L. E. BREDBERG

KERMIT AND ALTMAN POOLS IN WINKLER MAY BE JOINED

FORT WORTH, Tex., Sept. 27—An extension between the Halley and Kermit (Brown and Altman) areas in Winkler County, another deeper producer, which is also an extension in the western part of the southern Ward County area, other extensions and locations for new wildcats for the West Texas district, held the spotlight in that district this week, with a Glasscock County wildcat playing the leading role.

Floyd C. Dodson and others No. 1 J. G. Carter Estate, northeast of Garden City and about 5½ miles south and slightly east of the World pool in Glasscock County, which has been showing for a small producer, although it struck sulfur water last week, has been plugged back from total depth of 2,669 feet to 2,664½ feet and has been testing for water shutoff, showing 1,800 feet of oil in the hole while doing this work. The pay zone was reported at 2,632-34 feet and 2,653-57 feet. After setting 6-inch casing at around 2,625 feet, the oil saturated lime streaks will be acidized to increase the amount of oil and in an effort to make a commercial producer of it, which now appears likely, opening another producing area for the county in the Permian lime. It is located in the SW quarter of section 8, Block 33, Township 3s, T.&P. Survey, in the north central part of the county.

Winkler Extension

Bert Fields and others No. 1 Pure-Clapp, located in the NW SE section 26, Block B-5, Winkler County, which marked a 1¼-mile north extension to the Halley pool, and lies between that pool and the Kermit (Brown and Altman) area to the north about 2½ miles, flowed 507 bbls. oil on a 24-hour potential test and the rig was moved to No. 2 location. This well is important in that it probably means the tying in of the two separated producing areas by production, which will then give a field about 18 miles long from north to south, paralleling the Hendrick field and proving much larger in area than the old producing field, which was the first in the county. The hole was bottomed at 3,000 feet, and shot with 320 quarts of nitroglycerin before completing. It blew an estimated 12,000,000 feet of gas per day when first tested.

Another extension for a producing area in the county was registered this week by R. H. Henderson No. 1 Daugherty, NE quarter section 33, Block 74, P.S.L. Survey, about one-half mile northwest of production in the prolific Henderson area, north of the Hendrick field and recently opened by big wells. This new well is estimated good for around 300 bbls. per day from lime logged at 3,038-40 and 3,082-86 feet, total depth 3,098 feet. Storage is now being erected preparatory to testing and it may show for a better well than now anticipated.

Wildcats

Bahan & Rhodes of Abilene are moving in a rotary rig to drill a wildcat on the H. E. Bonebrake lands, 20 miles north of Fort Stockton, in Pecos County. Location is in section 111, Block 8, H.&G.N. Survey, 4 miles southwest of the Pecos Valley pool, and is to go to 2,500 feet, seeking the pay found in the Shipley pool to the north in southern Ward County.

Another wildcat is to be drilled by H. E. Ogden, formerly of Wichita, Kans., on the E. C. Rawlings lands, in section 391, Block 1-A, H.&T.C. Survey, about 4 miles north of Bronte in Coke County. A previous test drilled in this area by Mr. Ogden, in section 390, about 1 mile northwest of the new location, was abandoned at 3,500 feet with a hole full of water at 3,470 feet, previously logging a showing of oil at 3,276 feet. The operator has a block of some 6,000 acres and is to sink this test to 4,500 feet unless production is found at a lesser depth.

Dawson County Wildcat

The Dawson County wildcat which has been showing for a small producer and consequently a discovery well, which if proven will open the first production in the county, has been swabbing this week, intermittently, after being shut down at various intervals. In swabbing down to within about 300 feet of the bottom after standing 16 hours, it swabbed 19 bbls. of oil. It then filled 700 feet in 16 hours, the water being estimated at around 5 gallons hourly, the remainder being oil. It has been deepened 20 feet to 4,991 feet and may be acidized this week. Ray Albaugh and others are drilling it on the John Robinson lands, in section 46, Block M, E.L.&R.R. Survey.

Deep Test

Gulf Oil Corporation No. 2 Waddell, second deep test in the Tubb area, western Crane County, where the company last summer drilled in an Ordovician producer, has been showing some salt water, with its source in doubt, consequently a Schlumberger test has been advised. It was shut down at 6,246 feet in shaley lime, for this purpose, after making a drill stem test which showed salt water, a little oil and some gas from 6,113-6,231 feet. Location is in section 18, Block B-21, P.S.L. Survey, about 1½ miles to the northeast of the first Ordovician producer in this area in which there also are several Permian lime producers. Top of the Simpson was reported at 6,003 feet, 3,384 feet subsea datum, about 85 feet lower than in the Ordovician discovery.

Ward Extension

Humble Oil & Refining Co. No. 8 Richter, section 27, Block 34, H.&T.C. Survey, about one-half mile south of a well which a couple of weeks ago logged a deeper pay in the western extension area of southern Ward County, has logged the deeper sand pay at 2,904-12 feet and started flowing 14 bbls. of oil per hour when bottomed at 2,940 feet. It later flowed 1,774 bbls. of oil through casing in 24 hours after being shot with 180 quarts from 2,850 feet to the total depth. This is the second test in this area to prove a good well from the deeper or second pay zone and all other producers in the area and future wells will probably be carried to this second pay before completing unless they prove excellent wells from the shallower pay.

Ector Extension

The Phillips Petroleum Co. and Pure Oil Co. drilled in a half-mile eastern extension to the Goldsmith field in Ector County this week in section 23, Block 44, Township 1s, T.&P. Survey. The well gauged 2,322 bbls. of oil in 24 hours at total depth of 4,160 feet, through open casing. It is about one-half mile east of the nearest producer in the field and one of the best natural producers yet drilled in. It will probably be acidized and shot before it is completed.

Wildcat Abandonment

Humble Oil & Refining Co. No. 1 Eubanks, wildcat, about 6 miles southwest of Seminole, Gaines County, has been abandoned at 6,192 feet after plugging back to shut off water and shoot, preparatory to testing. It is located about 6 miles northwest of the county's discovery and lone producer, and in section 6, Block AX, P.S.L. Survey.

Another abandonment for the week was Cardinal Oil Co.'s No. 1-37 White & Baker, about 7 miles west of the Yates field, is Pecos County. It struck sulfur water at 1,658 feet, 4 feet in the lime, and was given up as a failure at this depth. There are a couple of small producers and one gasser in this shallow producing area, drilled in last year by the Gulf Oil Corp., which made the discovery, and also the Cardinal Oil Co.

Ranger and Wichita Falls Districts

A new producing area has been added in Eastland County by Dorothy Oil Co. on the Holcomb heirs lands, in section 1, Block 4, H.&T.C. Survey, about 3 miles east of the county seat, Eastland. The well made 36 bbls. of oil and nearly 2,000,000 feet of gas when completed at 1,500 feet, to which depth two offsets are preparing to drill immediately.

A wildcat north of Hawley, in Jones County, was abandoned this week by Thomas D. Humphrey on the W. F. Rushing lands. Same is in section 11, Martinez Survey No. 194, and was given up at a total depth of 2,733 feet without encountering any showings of oil or gas.

The Anderson-Kerr Drilling Corp., which recently opened the pool 3 miles east of Gainesville in Cooke County, is leasing a block of some 3,000 acres centering in the De Marcus and H. Edmiston Survey, with contemplations of drilling a 3,500-foot test, another Cooke County wildcat.

Grayson County Wildcat

Location has been made by the Olson Drilling Co. of Tulsa for a second test in the area 4 miles northwest of Denison in Grayson County, where they recently abandoned a deep test after encountering fishing difficulties. The new location is about one-quarter mile south of the recent abandonment, located on the D. R. Utiger lands in the P. P. Cady Survey No. 301. It is to go to 6,000 feet. The former test was given up at 5,890 feet.

Endicott and associates have taken a block south of Pilot Grove in the southeast corner of Grayson County and west of Whitewright, and plan on sinking a 3,500-foot hole in quest of production on the Langford lands in the F. Ashey Survey.

Application to Lay Line

The Patten Pipe Line Co., associate company of the Patten Oil Co., which has production in the new Anderson-Kerr pool in eastern Cooke County, has applied to the Railroad Commission for permit to lay a short oil line to connect the pool with a loading rack on the Missouri, Kansas & Texas Railroad a couple of miles north of the field.

New Refinery

The Gainesville Oil & Refining Co. started operating its 1,000-bbl. skimming plant 1 mile east of Gainesville this week. It will afford the Anderson-Kerr pool another outlet for its oil, which is badly needed as wells are being completed each week with only one line out of the field and trucks taking part of the oil at the present time. Two other refineries are nearing completion near the town of Gainesville, which will also operate on crude from the field.

Reed and others No. 1 Randall, located in the J. N. Redman Survey, one-half mile south of production in the pool, had a showing of oil from 2,507-17 feet and set casing at the latter depth to test the deeper showing of oil, this showing coming from sand below the regular pay formation

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PERSONAL

HUBERT C. FERRY, lease supervisor for Union Oil Company of California, handles all matters pertaining to lease obligations, and acts as contact man between the company and its lessors. Mr. Ferry joined the roster of Union Oil Company employes in 1918 in the engineering department, and in 1921 organized and took charge of the franchise and right of way division. He played a large part in the institution of a cooperative waste water disposal system for southern California oil fields, and was a member of the committee that drew up articles of incorporation and by-laws for the Kettleman North Dome Association. For some years he was in charge of Union Oil Company's Bastenchury Citrus Project.

LEE GILLIE has joined the staff of Northwest Refining Company at Cut Bank, Mont.

HARRY LUNDQUIST, of Iverson Tool Company, has returned to Tulsa from a vacation trip to Minnesota, where he did considerable fishing.

MISS MAUD REESMAN of Dayton, Ohio, has returned home after a month's visit with her father, S. S. REESMAN, oil operator, at Chatham, Ontario.

MR. AND MRS. WILLIAM MUIR, of Sarnia, Ontario, Canada, left recently for South America, where the former will join the International Petroleum Company staff.

COMMANDER H. V. LAVINGTON, general manager in Trinidad of the the Trinidad Petroleum Development Company, has returned to the Colony after his vacation in England.

JAMES M. BARRETT, JR., formerly of the Ohio Oil Company production department, Tulsa, has been transferred to the land department as scout and will have headquarters at Enid, Okla.

EMIL PAGANINI, of the Ohio Oil Company accounting department, Tulsa, delayed his vacation until September, and then went to Florida, where he now is enjoying the sunshine of the Peninsula state.

E. B. EMRICK, petroleum geologist, was in Great Falls, Mont., last week, having driven his car in the trip from Conrad, Mont., to the Great Falls for the first time since July. He has been laid up by an operation on an old injury to his leg.

LUTHER WILLIAMS, editor of Mid-Continent Petroleum Corporation's house organ, "The Diamond," has been in midwestern cities, including Omaha, Des Moines and Kansas City, making addresses preparatory to a radio series the company plans to start in October.

DR. J. A. ALLAN, professor of geology at the University of Alberta, addressed the young men's section of the Calgary Board of Trade recently on Alberta oil prospects.

JAMES F. CORCORAN of Trimont Manufacturing Company has returned to his home in Tulsa after spending three months in the East on a business and vacation trip.

G. H. VAN SENDEN, vice president of Shell Oil Company and in charge of manufacturing, has announced the appointment of C. O. F. JENKIN as manager of the company's Martinez refinery and I. M. HEMPHILL as manager of the Wilmington refinery.

R. L. PATTINSON of the Central Pipe Line Company of Chatham, Ontario, with MRS. PATTINSON and children, HULME and MARY, left Montreal on September 18 for England. Mr. Pattinson will return to Canada early in November, but Mrs. Pattinson and family will spend the winter at Weymouth, England.

T. OGLETREE, who has been carrying on drilling operations in Chatham Township, Kent County, Ontario, visited New York City recently on business.

HAROLD PAULEY, president of Petrol Corporation of California, recently purchased C. E. HOFFMAN'S 85-foot schooner Fandango and will dispose of his present 70-foot cruiser, Eldorado.

ROBERT P. SHERMAN, who entered the employ of Associated Oil Company in 1928 and has served in various positions of the sales division, has been appointed assistant vice president of the company.

DAN CAMERON, a member of the scouting department of the Carter Oil Company, spent several days of his vacation period renewing acquaintances in Los Angeles and visiting old friends on the campus of the University of California.

R. B. McCOLL has been elected a director, member of the executive committee and president of Alco Products, Inc., to succeed JOSEPH DAVIS, who resigned recently on account of ill health. Mr. Davis also resigned as executive vice president of the American Locomotive Company and DAVID BASSO was elected to succeed R. B. McColl as vice president of the diesel engine division of the American Locomotive Company.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The will of the late John Eaton, head of the Oil Well Supply Company for many years, disposed of an estate worth over $1,500,000. The estate is to be held in trust for the benefit of the widow, two daughters and their children.

Charles W. Gates, heavily interested in the Texas Company, and Florence E. Hopwood, of Minneapolis, Minn., are married at Uniontown, Pa. Their wedding tour will terminate at Port Arthur, Tex.

20 YEARS AGO

The Henry L. Doherty interests buy the Ponca Refining Company, the Cushing Refining Company in Oklahoma and the Producers Refining Company at Gainesville, Tex., paying, it is estimated, about $6,000,000 for the three properties. The deal includes three refineries, 155 miles of pipe lines, gathering lines, tankcars, etc. Doherty recently purchased a refinery in Okmulgee, Okla.

Levi Smith is the new general manager of the Pen Mex Fuel Company in Mexico. He succeeds J. S. Sidwell, who recently resigned, and whose assistant he had been.

Fortuna Oil Company opens the Ingalls pool, Oklahoma, with a 150-barrel well in secton 33-19-4. It is the deepest production in Oklahoma. Sand was topped at 3,685 feet.

10 YEARS AGO

The first well shot in the Seminole pool, Oklahoma, is Indian Territory Illuminating Oil Company No. 2 Reed, in NW SW NE section 24-9-6. The shot increased production from 34 barrels per day to 1,070 barrels in 15 hours.

Yount Lee Oil Company produced 46,000 barrels of the 95,000-barrel production of the Spindletop pool in Texas one day this week. The field averaged 89,500 barrels per day during the week.

GAIN REINGOLD has returned to Lethbridge, Alberta, Canada, from Los Angeles, Calif.

DR. E. JAMIESON, chief medical officer to the Anglo-Iranian Oil Company, has retired from service after 17 years spent in Iran with the company.

H. E. RILEY and J. B. STUMP recently purchased the Clark Authorized Bit Service at Rodessa, La. The new name of the service will be Acme Bit Company.

HON. C. C. ROSS, minister of lands and mines for Alberta, Canada, has returned to Edmonton from an inspection tour of southern Alberta drilling operations.

E. M. SKEEHAN, of Los Angeles, Calif., vice president and general auditor of Barnsdall Oil Company, visited the Tulsa headquarters of the company in the past week.

L. D. MISENER, vice president and treasurer of Barnsdall Oil Company, has been spending a month's vacation in California. He is expected to return to Tulsa this week.

R. E. GIDDENS is district manager of Lucey Products Corporation, which has opened a district office at Shreveport, La., to serve the Arkansas, Louisiana and East Texas area.

JOSEPH A. SKELLEY, of Tulsa, assistant to the president of Stanolind Pipe Line Company, returned this week from Nebraska, where he has been looking over company property.

DR. P. S. WARREN, of the University of Alberta, Canada, with several assistants, is carrying on geological survey work in the Red Deer district of Alberta for the Calgary Gas Company.

PARAGRAPHS

E. B. NOBLE, assistant manager of exploration for the Union Oil Company of California, is visiting in Shreveport, La., studying the oil situation in North Louisiana. Besides visiting several fields, he also visited Panola County, Texas, where there has been a great deal of leasing activity recently.

GEORGE F. SMITH, treasurer of the Continental Oil Company, was elected a member of the board of directors of the Southland Royalty Company at a meeting of the board at Ponca City, Okla. Mr. Smith succeeds H. K. V. TOMPKINS, former Continental executive, who recently resigned.

W. F. CHISHOLM, of Shreveport, La., has been appointed supervisor of conservation in the Rodessa field by the Louisiana Department of Conservation. Mr. Chisholm was formerly director of the minerals division of the state department. His headquarters will now be at the main office of the department at New Orleans, La.

WALTER S. REID, connected with the International Petroleum Company, at Lima, Peru, sailed from New York September 25 aboard the Grace Liner, Santa Barbara, for his South American station. Also aboard the Santa Barbara were MRS. JESSIE ORR CURRIE and MR. and MRS. S. GORDON MYRANS, of Toronto, Canada, en route to Talara, Peru, where they are connected with the International Petroleum Company.

DR. J. A. SHAW, of New Orleans, La., director of the minerals division of the Louisiana Department of Conservation, spent several days in Shreveport, La., this week working on Rodessa conservation problems.

LORNE DUNCAN, wife and family, who have been spending four months in Petrolia, Ontario, and vicinity, will sail on October 7 from New York for Negritos, Peru, where Mr. Duncan is connected with the production department of the International Petroleum Company.

K. R. KINGSBURY, president of Standard Oil Company of California, and T. RIEBER, chairman of Texas Corporation, who have been visiting Europe to study problems in connection with the marketing of oil from Bahrein Islands, have returned to Paris after a brief visit to London. They will shortly leave for Italy, from which country they will sail for New York on the S. S. Rex. JAMES A. MOFFETT, chairman of the recently formed California-Texas Oil Co., Ltd., will remain in Paris to continue investigations.

DR. DONALD L. KATZ has resigned as chief of production research for Phillips Petroleum Company, Bartlesville, Okla., to take the position tendered him as assistant professor of chemical engineering at the University of Michigan. Doctor Katz was a student of PROF. G. G. BROWN at the university previous to his entering the service of the Phillips Petroleum Company in June, 1933.

CLYDE BECKER, Chickasha, Okla., geologist, who has been doing special work for an Arizona mining company, has returned to Oklahoma on a business mission.

DAVID RITCHIE of Vancouver, British Columbia, was in Calgary, Alberta, recently and inspected oil developments in southern Alberta.

HENRY G. HUNT, of Mount Pleasant, Mich., executive secretary of the Oil and Gas Association of Michigan, has recovered from a week's illness.

W. ROSS LEARD, of the Magnolia Petroleum Company production department, Dallas, Tex., has gone to Corpus Christi and other South Texas points for his vacation.

DAVID E. BEACH, of Mount Pleasant, Mich., head of the Pure Transportation Company, has recovered from illness which kept him in a Michigan hospital for several days.

L. H. DEATHERAGE, sales manager for the Bell Oil & Gas Company, Tulsa, is in St. John's Hospital in that city, following a minor operation which is expected to keep him from his desk for about 2 weeks.

J. BEN CARSEY, chief geologist for Humble Oil & Refining Company in the West Texas division has been placed in charge of the land and geological activities of the company both in West Texas and New Mexico with headquarters in Midland, Tex. The company's Roswell, N. Mex., headquarters have been combined with the West Texas division. W. T. DOHERTY is general superintendent.

MORGAN J. DAVIS, chief geologist of the New Mexico division of the Humble Oil & Refining Company at Roswell, has been transferred to Houston, Tex., where he will become chief geologist of the Gulf Coast division. MILWARD MILLER and WILLIAM E. COX, geologists, have been moved from Roswell to Hobbs, N. Mex. WELDON CARTWRIGHT, microscopic geologist and MISS FLOYD HASSELL, secretary, have been transferred to the Midland headquarters of the merged West Texas and New Mexico divisions.

Geologist Has Arrived

Announcement that Frank Ricker Clark had been made a vice president of the Ohio Oil Company in charge of geology stirred no astonishment. Which shows how times have changed. Not so many years ago oil companies didn't want geologists cluttering their offices at all, let alone making them vice presidents.

FRANK R. CLARK

Mr. Clark was born in Utah and after graduating from the University of Utah in 1910 he joined a geological party sent to Mexico by S. Pearson & Son. The next year he entered the United States Geological Survey in Washington. He left the survey in 1919 to work for the Durham interests in West Virginia.

Since July 1, 1923, Mr. Clark has been associated with the Ohio Oil Company. He was with the Mid-Kansas Oil and Gas Company, an Ohio subsidiary, in November of that year, when he was transferred from Mineral Wells, Tex., to the Marathon Oil Company, also a subsidiary, in Tulsa, where he has resided since. In August, 1936, when the parent company took over Marathon, Mr. Clark, who had been geologist and a director of the subsidiary, was advanced to his present post.

Mr. Clark is a past president and former secretary-treasurer of the American Association of Petroleum Geologists and a past president of the Tulsa Geological Society. His wife, who was Miss Theresa Burton, of Salt Lake City, died in May, 1936. He has two daughters and a son.

C. H. FIDDLER, out of the Houston office of the Tide Water Oil Company, is spending a two weeks vacation in the East.

LEONARD S. ALLEN of the National Tank Company has returned to Tulsa from a trip into western Kansas, stopping at Lyons, Hutchinson, Great Bend, and Russell.

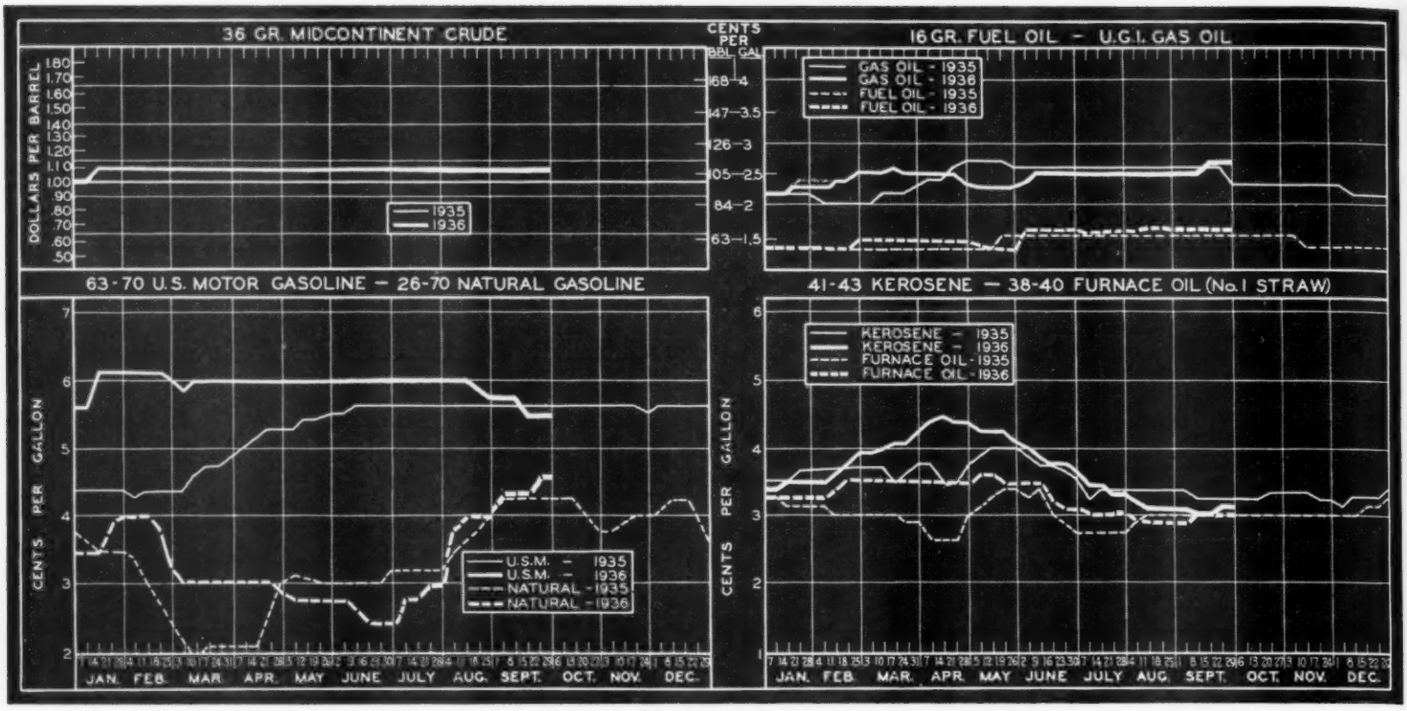
E. R. MELTON, former executive engineer with the Cambridge Instrument Company, is now secretary and chief engineer of the National Geophysical Company, Dallas, Tex.

H. L. GENTRY, of Jackson, Mich., geologist and oil well fire fighter in Michigan, has been named president of the newly organized Utility and Industrial Supply Company, of Jackson.

MAJOR J. P. PARTEN, president of the Woodley Petroleum Company, Houston sailed from New Orleans, La., last week for a vacation in the East. He was accompanied by his wife.

W. V. HOWARD, formerly of the Department of Geology of the University of Illinois, will be in charge of the petroleum division of J. G. Wray & Company, consulting engineers of Chicago, Ill., with offices in Tulsa.

THOMAS MIDGELY, JR., vice president of Ethyl Gasoline Corporation, New York City, and of Kinetic Chemicals, Inc., Detroit, Mich., has been awarded the William H. Perkin medal for 1937 for "distinguished work in applied chemistry, including the development of antiknock fuels and safe refrigerants," it has been announced by DR. FOSTER D. SNELL, honorary secretary of the American Section of the Society of Chemical Industry.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
CENTS PER BBL. GAL
1935
1936
16 GR. FUEL OIL - U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE — 38-40 FURNACE OIL (No. 1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Reports of Diminished Runs to Stills Help Gasoline Prices in Group 3

By T. F. SMILEY

Reports that Mid-Continent refiners were beginning to make substantial cuts in their runs to stills went far this week toward checkmating attempts on the part of bargain-hunters to beat down the tankcar price of gasoline in the Group 3 area. For weeks the failure of many refiners to restrict their motor-fuel operations to the diminishing seasonal demand had exerted a weakening influence on the market, but a better tone was observable as the present week opened.

Although some buyers reported ability to get third-grade gasoline at slightly shaded prices, the situation in East Texas, a major source of this material, appeared to be satisfactory. Truck prices were quoted as 4⅝ to 4¾ cents for gasoline to be retailed inside the state, indicative of greater strength than characterized the tankcar market.

HOPEFUL FEELING EXPRESSED

In addition to the slowing up of gasoline demand as vacationists return home, incessant rains over part of the territory served by Group 3 refiners have been a hindrance not only to tourist business but to use of the family car. Consumption, however, does not appear to have been seriously affected, and feeling in the trade is that with favorable weather conditions and runs to stills reasonably restricted, motor fuel is likely to regain a profitable price level and experience a long fall season, as it did last year.

Observers call attention to the fact that while some Mid-Continent refiners have been making too much gasoline, others have been in a sold-out condition for weeks, failing to maintain even proper working stocks. Both spot and contract orders have been appearing in encouraging volume, and some refiners who recently were ready to consider offers below the published quotations are now reported to be insisting upon the going prices. The disposition to maintain tankcar prices in the face of reductions of three-tenths cent in tankwagon and dealer prices announced by Standard Oil Co. (Indiana) is regarded as distinctly hopeful.

Natural gasoline was having no difficulty in holding the high ground it had achieved, the highest recorded in three years. Some manufacturers reported they were booked up through October. Others who were not indicated they might have been if they had so desired; but they preferred to retain confortable stocks in order to take care of the wants of regular customers. Most contract buyers were reported to be taking all the material they could get under their contracts, and spot buyers were increasing their purchases 10 to 50 per cent above their takings of a year ago.

PEAK PRICES UNDESIRABLE

The scarcity of available material (some manufacturers asserted they were turning away business) has provoked discussion concerning the probability of natural gasoline prices going still higher. Although it is believed no difficulty would be encountered in getting higher prices, it is known that there is a pronounced feeling in the trade against getting them. Records indicate that when natural gasoline prices have been allowed to get far out of line with those obtainable for refinery gasoline there has been such an unfavorable reaction that the average level for the year has fallen below the average recorded when suppliers kept prices from rocketing to high peaks. It is better business, manufacturers point out, to get reasonably profitable prices for a long period than to reach for top prices whenever tight market conditions seem to make them available.

Strengthening of the demand for high-viscosity, low-cold-test industrial fuels usually is observed at this season, and the fact that sales in substantial volume are reported at prices which ruled throughout the summer is taken to indicate unlikelihood of a higher level this year. It is reasoned that if higher prices were in sight the material would be held for them.

The light fuels continued to gather strength. Kerosene was in more active demand, with prices stiffening. Bright stocks were firm, but the neutrals, notwithstanding prices in the East went up a cent, were unsteady. Wax was strong.

Refined Oil Market Barometer

Advent of cooler weather is adding a little life to the light fuels, although spottiness in this material is reported along the East Coast and most of the large buyers filled their storage last summer. Gasoline, which had been exhibiting softness in various areas, is displaying a firmer tone. No diminution in the strength of the naturals is apparent.

MID-CONTINENT. Gasoline steadier. Naturals strong. Kerosene and furnace oils firmer.

EAST COAST. Kerosene up. Gasoline export business improving, domestic steady.

GULF COAST. Gasoline firmer.

PENNSYLVANIA. Neutrals up. Little change in other products.

CALIFORNIA. Gasoline and fuel oil firm.

CHICAGO. Gasoline holding. Kerosene firm. Heavy industrial oils strong.

Revival in Export Gasoline Markets and Kerosene Feature on East Coast

By H. STANLEY NORMAN

NEW YORK, Sept. 29.—Revival of interest in kerosene with firmer prices developing as open market business quickened and a turn in the gasoline export trade for the better were outstanding developments in Atlantic and Gulf coastal regions. Meanwhile, gasoline was reported steady, although the ever-present reports of scattered business below regular prices maintained their persistency.

Cooler weather in the north Atlantic Coast territory produced the expected seasonal interest in fuel oils, but there appeared to be a cross current which received no logical explanation. The unexplained cross current in the fuel oil market developed with revelation that at least one independent dealer voluntarily reduced the maximum of over-the-winter contracts a quarter of a cent to 6¾ cents per gallon. The original contracts in most instances called for a maximum of 7 cents for the coming winter and a minimum of 6½ cents. The voluntary change submitted to customers by one dealer lowered the maximum to 6¾ cents and provided that the minimum price would be passed on to the consumer in the event the spot market dipped below 6½ cents per gallon.

Inquiry developed no logical explanation of the voluntary contract revision. Some speculated that the heavier stocks of distillate fuels east of the Rocky Mountains existing now, compared to similar dates in 1935, may have caused the change. Others held the belief that suppliers are adjusting prices to their dealers in accordance with terms of the Robinson-Patman Act and that downward revisions were required in some instances where suppliers had dipped under the accepted prices to obtain the business of a few customers during the summer contract campaign. Under some interpretations of the Robinson-Patman Act, figures prevailing in the lowest contracts to dealers or jobbers will have to be passed on to all customers of that particular supplier. Two cargo sales of gasoline on the Gulf Coast for export accounts were closed during the week ended September 19 and were the first business of any importance for several months. Both cargoes are intended for French buyers and are to be lifted probably in November and December. The sales both involved split cargoes consisting of 64-66 octane, 375 endpoint and U. S. Motor material. The 64-66 gasoline brought 5.125 cents and the U. S. Motor contract was closed at 4.9375, probably lower than most marketers believed possible under existing circumstances. Indications were given, however, that most suppliers are unwilling to consider business for less than a full quarter of a cent per gallon above the prices prevailing on the two cargo sale.

One inquiry, regarded as a market "feeler," remained in the hands of Gulf Coast refiners for a cargo of 64-66 gasoline and kerosene or U. S. Motor gasoline. The "feeler" types of inquiries have been present in the Gulf Coast, however, for months and marketers are paying little attention to them as a possible source of actual business.

In most instances in the past, those placing the inquiry have used responses as guides for closing with Rumanian and Russian sources. Although the trend no longer contains news value, it is significant to note that domestic refiners are continuing slowly with their protracted plan of converting all retail outlets into private hands. Each week finds several of the larger companies submitting a new list of points at which the conversion of stations to private ownership has been completed.

Last week's reductions of a half cent per gallon in the tank-wagon price to dealers at Washington and Baltimore by Standard Oil Co. of New Jersey was followed in most instances by similar cuts in the retail quotations of other companies and dealers at those two points. The reduction actually represented a retrenchment from a position taken earlier to increase the dealer margin at those two points. The New Jersey retail picture remains clouded by irregularities at many points, but practically no changes have been noted in New York and New England territories for several weeks. The metropolitan New York stations continue offers of 7 gallons for $1.05 and a majority of suburban outlets quote 6 gallons for 98 cents to $1. Although temperatures have dropped appreciably from the average in August and July, motoring weather is still attracting record breaking week-end travel and a resultant satisfactory consumption of gasoline all along the north Atlantic Coast.

Inter-refinery buying of neutral oils in preparation for the use of lighter crankcase lubricants in the winter season continues and there is evidence of scarcity in this material at several points. By shopping, however, refiners in need of the material are said to be finding their requirements at the current quotations and the problem so far seems to be one of finding the right supplier.

Suppliers of bright stock are finding the combination of brisk export demand and high domestic consumption making deep inroads on stocks. Some estimate that the interior stocks have been reduced as much as 30 to 40 per cent and further reductions may be experienced as jobbers replenish their diminished storage for fall and early winter business.

Continued heavy demand for grade C bunker fuel oil is gradually whittling into stocks and the price of $1.10 per barrel in Atlantic waters and 90 cents Gulf Coast seem in fair position to advance. Refiners in Atlantic Coast territory said at the end of last week that no immediate advance is contemplated, but some believe the market is in position to stand another nickel per barrel.

In contrast to the cross current in the retail contracts for furnace oils, the tankcar interest in all fuels seems to be gaining as the summer advances toward conclusion. The 36-40 material was reported especially interesting to buyers in eastern territory, although there has been insufficient actual business closed to change the current quotation of 4.25 cents per gallon.

Domestic burner units are being gradually brought into use in the extreme northern part of New England, but more southern points have not been forced into the heating picture so far. The continued moderate temperatures from the middle of New York state south leaves the heating oil situation unchanged in the most part. Most domestic consumers have accepted delivery of their storage capacity, jobbers are standing by for the first cooler weather and refiners in the meantime are running their distillate fuels to storage against contract commitments. There appears no uneasiness on the part of refiners, who feel that the sharp increase of nearly 20 per cent in installed burners will more than offset the slightly heavier stocks of fuel now than at the same time last year.

In fact, the Pennsylvania group and Atlantic seaboard refiners were reported in some instances cutting their production of kerosene and converting a maximum to furnace stocks.

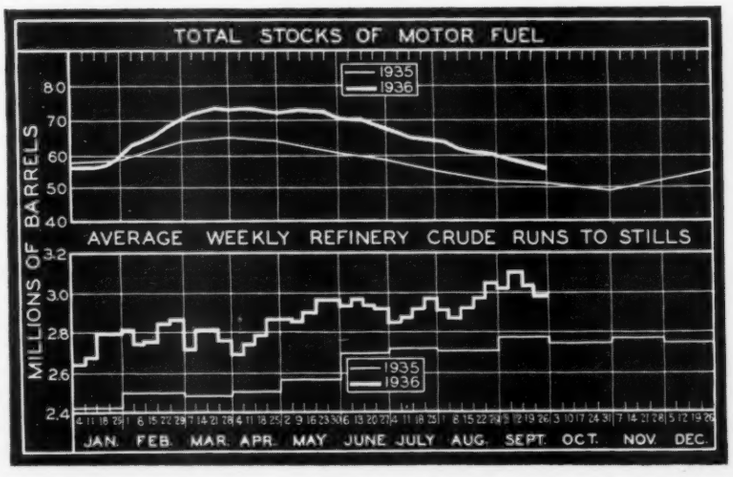
The crude scale wax market and the various grades of fully refined wax show no change in quotations, although suppliers seem unwilling to quote present prices for delivery over an extended period. At least the wax market is considered firm.

A. P. I. Weekly Refinery Statistics

Week Ending September 26, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	534,000	15,757,000	12,436,000
Applachian	94.8	107,000	2,075,000	638,000
Indiana, Illinois, Kentucky	96.1	419,000	8,265,000	6,444,000
Oklahoma, Kansas, Missouri	84.8	281,000	5,469,000	3,550,000
Inland Texas	48.5	119,000	1,296,000	1,700,000
Texas Gulf	97.0	618,000	6,614,000	8,488,000
Louisiana Gulf	96.4	131,000	1,505,000	2,285,000
North Louisiana and Arkansas	90.0	44,000	282,000	367,000
Rocky Mountains	61.9	46,000	767,000	802,000
California	92.6	475,000	11,364,000	73,484,000
Total reported	89.8	2,774,000	53,394,000	110,194,000
Estimated unreported		216,000	3,078,000	2,310,000
*Estimated total		2,990,000	56,472,000	112,504,000
*Estimated total previous week		3,010,000	57,286,000	113,118,000
†September 30, 1935		2,778,000	51,334,000	110,141,000

*Bureau of Mines basis, currently estimated. †Monthly report of U. S. Bureau of Mines.



DEPARTMENT OF GEOGRAPHY
THE UNIVERSITY OF NEBRASKA

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of September 29, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Chicago	15.4	17.4	4.0	9.2
Decatur, Ill.	15.4	17.4	4.0	9.2
E. St. Louis	15.1	17.1	4.0	8.9
Joliet	14.5	17.4	4.0	9.2
Peoria	15.4	17.4	4.0	9.2
Quincy	15.2	17.2	4.0	9.0
Davenport, Ia.	15.4	(*)	4.0	9.2
Des Moines	15.2	(*)	4.0	9.0
Mason City	15.6	(*)	4.0	9.4
Sioux City	15.4	(*)	4.0	9.2
Duluth, Minn.	16.2	(*)	4.0	10.0
Mankato	15.8	(*)	4.0	9.6
Minneapolis	15.8	(*)	4.0	9.6
La Crosse, Wis.	16.8	(*)	5.0	9.6
Green Bay	17.1	(*)	5.0	9.9
Milwaukee	16.7	(*)	5.0	9.5
Madison	16.8	(*)	5.0	9.6
Detroit, Mich.	15.0	(*)	4.0	8.8
Grand Rapids	15.4	(*)	4.0	9.2
Saginaw	15.6	(*)	4.0	10.1
Evansville, Ind.	17.1	(*)	5.0	9.7
Indianapolis	17.2	(*)	5.0	9.0
South Bend	17.5	(*)	5.0	9.0
Fargo, N. Dak.	16.8	18.8	4.0	10.6
Huron, S. Dak.	17.3	(*)	5.0	10.1
Sioux Falls	16.8	(*)	5.0	9.6
Kans. City, Mo.*	14.8	17.1	4.0	8.0
Springfield	14.5	(*)	4.0	8.3
St. Louis	15.1	(*)	4.0	8.9
St. Joseph*	14.8	(*)	4.0	8.6
Wichita, Kans.	14.3	(*)	4.0	8.0
Bartlesville, Ok.	15.0	12.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in these cities.

Discounts to dealers except in Iowa 3½ cents on premium and regular and 2½ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective August 1, 1936, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.75 cents; 100-119 gallons, 7.75 cents; 150 gallons and more, 7.25 cents. No. 1, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex furnace oil, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex fuel "A," less than 400 gallons, 5.75 cents; 400 gallons or more, 4.75 cents. Stanolex fuel "B," 5.25 cents per gallon gross; 800 gallons or more 4.25 cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.0
Augusta	18.75	19.5	7.0	*13.5
Macon	20.0	22.0	7.0	*14.0
Savannah	18.5	20.5	7.0	*12.5
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	20.0	21.0	9.0	11.0
Montgomery	21.0	22.0	9.0	11.0
Jackson, Miss.	20.0	22.0	7.0	*12.5
Vicksburg	19.5	....	7.0	12.5
Jacksonville, Fla.	18.0	20.0	8.0	11.5
Miami	19.5	21.5	8.0	12.5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20.0	8.0	11.5
Lexington, Ky.	19.0	21.0	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	18.0	19.0	6.0	8.5

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Grand Junction	21.5	23.5	5.0	15.0
Fueblo	19.0	21.0	5.0	10.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	21.0	23.0	6.0	14.5
Billings	22.5	24.5	6.0	14.5
Helena	22.5	24.5	6.0	14.5
Great Falls	22.5	24.5	6.0	14.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23.0	25.0	6.0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	19.0	21.0	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price 4 cents except in Montana where a discount of 2 cents off tank-wagon price only is allowed; divided dealer accounts. 3½ cents.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	19.5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20.5	6.0	13.5
Spokane	22.5	23.5	6.0	16.5

Discounts to dealers: on gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial dealers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag
Atl'tic City, N.J.	13.0	....	4.0	9.0
Newark	13.0	....	4.0	7.5
Annapolis, Md.	15.1	....	5.0	10.0
Baltimore	14.0	....	5.0	8.0
Cumberland	16.6	....	5.0	10.0
Wash'g'n, D. C.	12.0	16.0	3.0	9.0
Danville, Va.	17.2	20.7	6.0	12.9
Norfolk	16.0	19.5	6.0	11.3
Petersburg	16.3	19.8	6.0	11.7
Richmond	16.3	19.8	6.0	11.7
Roanoke	17.5	21.0	6.0	12.9
Charles'n, W. Vt.	15.8	....	5.0	12.6
Parkersburg	15.1	....	5.0	11.2
Wheeling	15.0	....	5.0	12.2
Charlotte, N. C.	18.4	....	7.0	12.6
Hickory	18.9	22.4	7.0	13.0
Mt. Airy	18.7	....	7.0	12.8
Raleigh	18.0	....	7.0	12.1
Salisbury	18.5	....	7.0	12.7
Charleston, S. C.	17.0	20.5	7.0	11.1
Columbia	18.0	21.5	7.0	12.1
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Omaha	17.8	19.8	6.0	9.5
McCook	18.5	20.5	6.0	10.2
Norfolk	18.2	20.2	6.0	9.9
North Platte	18.6	20.9	6.0	10.3
Scotts Bluff	19.3	21.3	6.0	11.0

Note—Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2¼ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by standard commercial consumers contract effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Philadelphia, Pa.	16.5	17.5	5.0	9.5
Pittsburgh	17.5	19.5	5.0	9.0
Allentown	16.75	....	5.0	9.5
Erie	17.5	18.5	5.0	8.0
Scranton	16.75	....	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	....	5.0	10.0
Wilmington	17.0	....	5.0	9.0
Springf'ld, Mass.	13.0	16.5	4.0	7.5
Worcester	14.0	17.5	4.0	7.75
Hartford, Conn.	13.0	16.5	4.0	7.0
New Haven	13.0	16.5	4.0	7.5
Providence, R. I.	12.0	15.5	3.0	7.0

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
N. Orleans, La.	19.5	23.0	*10.0	†13.0
Baton Rouge	17.5	21.0	8.0	11.5
Alexandria	18.0	....	8.0	11.0
Lafayette	18.5	....	8.0	12.5
Lake Charles	18.5	....	8.0	11.0
Shreveport	17.0	20.5	8.0	10.0
Knoxville, Tenn.	20.5	24.0	8.0	14.0
Memphis	18.5	22.0	8.0	11.0
Chattanooga	20.0	23.5	8.0	11.5
Nashville	19.5	23.0	8.0	10.0
Bristol	19.25	....	8.0	14.5

*Includes 2-cent parish tax. †Includes 1 cent parish tax and 1 cent state tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Post. deal.	Serv. sta.	Inc tax	tank-wag.
Albany, N. Y.	13.0	....	4.0	7.75
*Met. N. Y.:				
Manhtn., Bronx	12.7	....	4.0	7.25
Staten Island	13.0	....	4.0	7.25
Qu'ns & Br'klyn	12.7	....	4.0	7.25
Buffalo	13.5	....	4.0	8.25
Rochester	13.5	....	4.0	8.25
Syracuse	13.5	....	4.0	8.75
Boston, Mass.	13.0	....	4.0	7.50
Portland, Me.	15.0	....	5.0	7.75
Manch'ter, N. H.	15.5	....	5.0	8.00
Burlington, Vt.	16.5	....	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	15.0	17.0	5.0	7.5
Fort Worth	15.0	17.0	5.0	8.5
Houston	16.0	18.0	5.0	8.5
San Antonio	16.0	18.0	5.0	7.5
El Paso	17.0	19.0	5.0	8.0
Muskogee, Ok.	17.0	19.0	5.0	8.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17.0	19.0	5.0	8.0
Ft. Smith, Ark.	17.0	19.0	5.0	8.0
Little Rock	19.5	21.5	7.5	9.5
Texarkana	16.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 100 gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline
IMPERIAL OIL, LTD.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	29.8	32.8	7.0	23.3
Winnipeg, Man.	28.2	31.2	7.0	20.7
Regina, Sask.	29.5	32.5	7.0	22.0
Saskatoon, Sask.	32.3	35.3	7.0	24.8
Edmonton, Alta.	30.5	33.5	7.0	24.2
Calgary, Alta	28.0	31.0	7.0	21.5
Vancouver, B. C.	25.0	28.0	7.0	20.0
Montreal, Que.	19.5	22.0	6.0	17.5
St. John, N. B.	25.0	29.0	8.0	19.5
Halifax, N. S.	25.0	29.0	8.0	19.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less and in Vancouver where discounts are 1 cent per gallon more.

Retail Price Changes

Standard Oil Co. (Indiana) September 25 reduced tank-wagon and station gasoline .3 cent in Chicago, Decatur, East St. Louis, Peoria, Fargo, and Quincy and reduced station gasoline .1 cent in Joliet; September 25 reduced tank-wagon gasoline .3 cent at all points in Indiana, Wisconsin, Minnesota, Missouri, Kansas, South Dakota, Iowa and Michigan excepting in Milwaukee, where the tank-wagon price was advanced .4 cent.

Standard Oil Co. of New Jersey September 24 reduced tank-wagon gasoline .5 cent in Atlantic City; September 9 and 16 discontinued posting service station prices at Charleston and Wheeling, W. Va., respectively.

Standard Oil Co. of Nebraska September 25 reduced tank-wagon and station gasoline .3 cent at all Nebraska points.

Standard Oil Co. of Louisiana September 28 reduced tank-wagon and station gasoline (where posted) .5 cent at all Tennessee and Louisiana points except in New Orleans, Bristol and Knoxville.

Diesel Fuel Advanced

Effective Friday, September 25, Standard Oil Co. (Indiana) raised the price of its diesel fuel when delivered by tank-wagon, .3 cent per gallon.

At the same time the quantity dump discount of 1 cent per gallon for 100-gallon single deliveries was discontinued, and the former 100-gallon price basis will apply to all tank-wagon deliveries after the .3 cent advance has been placed into effect.

Canadian Fields

(Continued from Page 71)

October. The Olga company will also drill three more wells this fall on the Jackson lease, Lot 23, Concession 8, Bayham Township.

South and west of the Brownsville field, Perdue Syndicate No. 1, S half Lot 26, Concession 9, Malahide Township, Elgin County, is below 600 feet.

In Chatham Township, Kent County, Ogletree Syndicate No. 2, Lot 13, Concession 5, is below 390 feet, and running 8¼-inch casing.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of September 29, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:

62 octane and below (3d gr.)	.04½	.04⅝
63-67 octane	.04⅞	.05⅛
68-70 octane (regular)	.05½	.05⅝
60-62 400 grades:		
62 octane and below (3d gr.)	.04½	.04⅝
63-67 octane	.04⅞	.05⅛
68-70 octane (regular)	.05½	.05⅝
64-66 375	.04⅞	.05
68-70 360	.05	.05⅛

NORTH TEXAS—

U. S. Motor grades:

62 octane and below	.04⅝	.04⅜
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05⅝	.05⅜
60-62 400	.04⅝	.04⅞
64-66 375	.04⅞	.05

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:

62 octane and below	.05½	.05⅝
63-67 octane	.06⅛	.06½
68-70 octane (regular)	.06½	.06¾

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:

62 octane and below	.05½	.05⅝
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06¾

CHICAGO (Based on Group 3)—

U. S. Motor grades:

62 octane and below	.04½	.04⅝
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05½	.05⅝
60-62 400 grades:		
62 octane and below	.04½	.04⅝
63-67 octane	.05	.05⅛
68-70 octane (regular)	.05½	.05⅝
64-66 375	.04⅜	.05
68-70 360	.05	.05⅛

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:	
Below 60 octane	.05⅝
60-64.9 octane	.07
65-70 octane	.07¼
64-66 375	.06⅛
68-70 350	.06⅝

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.08
58-60 400	.07¾	.08½

EAST COAST (domestic)—

U. S. Motor below 60 octane:	
*New York (Bayonne)	.06¼
Baltimore	.06¼
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.06½
Philadelphia	.06½ .06⅝
Boston	.06⅝
Baltimore	.06½ .06¾
Charleston, S. C.	.06⅝
U. S. Motor, 65 and above:	
*New York (Bayonne)	.06⅝
Philadelphia	.06¾ .07
Boston	.07
Baltimore	.06¾ .07
Charleston, S. C.	.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05½	.05⅝
60-64.9 octane	.05⅞	.06
65 octane and higher	.06	.06¼

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05½
52-54 450 (blending)	.05½
54-56 450 (blending)	.05⅝

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04½
Grade 18-55	.05¼	.05½
Low vapor pressure grade:		
*14-pound v.p. (max.)	.05⅞	.06
*12-pound v.p. (max.)	.06¼	.06½

*Nominal.

NORTH TEXAS—

Grade 26-70		.04¼
Grade 18-55	.05	.05⅛

CALIFORNIA—

75-85 375-390	.07	.07⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70*	.04⅝	.04¾

*Price of this grade Sept. 22, 1936, was the same as listed here.

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.03¼	.03½
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.03½	.04¼
46-48 gr., 210-230 i.b.p., 480 max., e.p.	.04⅝	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅛	.03¼
42-44	.03¼	.03⅜

NORTH TEXAS—

41-43	.03¼	.03⅜

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.03¾	.03⅞

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04	.04¼

PENNSYLVANIA (inland refineries)—

45	.04¾	.04⅞
46	.04⅞	.05
47	.05	.05⅛

CHICAGO (Based on Group 3)—

41-43	.03	.03¼
42-44	.03¼	.03½

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03½	.05

NEW YORK (Bayonne, N. J.)—

41-43	.04⅝

GULF COAST (domestic)—

41-43	.03⅞

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03	.03⅛
No. 1 straw, 38-40	.03	.03⅛
No. 2 straw, 32-36	.02⅞	.03⅛
No. 2 dark, 32-36	.02⅞	.03
No. 3, 28-32	.02¾	.03
No. 3, 15 and above, 28-32	.02⅝	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42	.03	.03⅛
No. 1 straw, 38-40	.02¾	.03⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03	.03⅛

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03⅛	.03¼
No. 3, 28-32	.02⅞	.03

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-42	.03	.03⅛
No. 1 straw, 38-40	.02⅞	.03
No. 2 straw, 32-36	.02¾	.03
No. 2 dark, 32-36	.02¾	.02⅞
No. 3 zero to 15, 28-32	.02⅝	.02⅞
No. 3, 15 and above, 28-32	.02⅝	.02½

NEW YORK (Bayonne, N. J.)—

*No. 1		.04⅝
*No. 2	.04	.04¼
*No. 4		.04

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02⅝	.02¾
No. 4, low cold test, 24-28	.95	1.05
No. 4, 15 and above, 24-28	.80	.85
No. 5, low cold test, 18-22	.72½	.80
Below 18 fuel oil, industrial	.70	.75

NORTH TEXAS—

U.G.I. gas oil	.02½	.02⅝
No. 4, 24-28, low cold test	.95	1.00
No. 5, low cold test	.77½	.80
Below 18 fuel oil, industrial	.65	.75

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.02¾
10-14 fuel oil, industrial	.70	.75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4, low cold test, 24-28	.95	1.00
No. 4, 15 and above, 24-28	.80	.82½
No. 5, low cold test, 18-22	.72½	.75
No. 6, low cold test, 10-16	.62½	.67½

PENNSYLVANIA (inland refineries)—

36-40	.04¼	.04⅜

CALIFORNIA—

Los Angeles:

30-34 gas oil, per bbl.	.95	1.15
24 plus diesel	1.00	1.25
24 plus diesel (bunkers)	1.05	1.30
12-16 (bunkers at tidewater)	.85	.95
10-16 (cargo lots)	.75	.95
12-17 (tankcars)	.70	.95
San Joaquin Valley:		
10-18 (tankcars)	.70	.75
San Francisco:		
27 plus diesel		1.35
24 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03¼	.03⅝
28-30 diesel (bunkers)		1.50
Bunkers (bulk cargoes)		.87
Bunker C (bunkers)		.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04¼
28-30 diesel (lighterage 6¼ per bbl.)		1.65
28-30 diesel (tankcars)	.04¼	.04½
*Bunker C (to ocean-going ships in N. Y. harbor)		1.10
Industrial fuel (tankcars)		.03⅜

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.21½
150-160 D, 0-10	.18½
150-160 D, 15-25	.18
150-160 E, 15-25	.17½
100-110 D, 0-10	.17
Steam refined:	
631 green (treated)	.14
600 dark green (untreated)	.05½

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade No. 8 color, 145-50 at 510; 540-550 flash):

10 pour test	.24½ .25
15 pour test	.23½ .24
20 pour test	.22½ .23
25 pour test	.21½ .22
Steam refined:	
600	.13½ .14
650	.14½ .15
600 Pennsylvania flash	.15½ .16
630 flash	.17½ .18
600 Warren E filtered	.15½ .16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:

150-3	.10
180-3	.11¼
180-4	.10⅜
200-3	.11⅜
200-4	.11¼
250-3	.13⅜
250-4	.13½
280-3	.14⅜
280-4	.14½
300-3½	.15¼
400-3½	.16
100-2 paraffin oil	.05⅜

15-20 Cold Test:

200-3	.10⅜
200-4	.10½
240-3	.12⅜
240-4	.12½
280-3	.13⅜
280-4	.12⅜

GULF COAST—

Pale Oils:

200-3	.06½	.07
300-3	.07	.07½
500-3½	.08	.08½
750-3½	.08½	.09
1,200-3½	.09	.09½
2,000-4	.09¼	.09½

Red Oils:

200-5-6	.06½	.06¾
300-5-6	.06¾	.07
500-5-6	.07½	.08
750	.08	.08½
1,200-5-6	.08½	.09

CALIFORNIA (moving to com. market)

Pale Oils:

100-2½-3		.06
200-2½-3		.06¼
300-3-3½		.06½
400-3-4	.08½	.09¼
450-3-4	.09¾	.10
550-3-4	.10	.10½
600-3-4	.10¼	.10½

Red Oils:

200-4-5		.06
300-5-6		.06½
350-5-6	.07	.08
400-5-6	.08	.08½
450-5-6	.08½	.08½
500-5-6	.08½	.09
600-5-6½	.09	.09½
700-6½ plus	.09¾	.10
750-6½ plus	.10	.10½
900-6½ plus	.10¾	.10½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.20½	.21
10 pour test	.19½	.20
15 pour test	.19	.19½
25 pour test	.18	.18½
180 vis. at 70° F., 3 color:		
25 pour test	.20½	.21
200 vis. at 70° F., 3 color:		
Zero pour test	.24	.24½
10 pour test	.23	.23½
15 pour test	.22½	.23
25 pour test	.21½	.22

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02½	.02⅝

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0245	.0250
124-126 (a.m.p.) w.c. scale	.0250	.0255

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0240	.0250
124-126 (a.m.p.) y.s.	.0240	.0245
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03¼
Lily white	.06⅝	.06¾
Snow white	.07⅜	.07⅞
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05¼
60-62 400		.05⅜
61-63 390	.05⅜	.05½
64-66 375		.05½

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane		.05½
65 and above 400 e.p.	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white	.03⅝
41-43 water white	.03¾
44 water white	.04½

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E	.22	.22½
600 S.R. unfiltered	.20	.20½
650 S.R. unfiltered		.21½
600 flash S.R.		.22½
630 flash S.R.	.24	.24½
Bright Stocks:		
8 color		.28
6½ plus color in dilution		.27

NEUTRAL OIL

200-3 color	.27
150-3 color	.23½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0245	.0250

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gulf Oil Corp.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.18
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.18
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1936)*	.78
Hogback, N. Mex.*	1.21
Pondera, Mont., (Jan. 29, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Jan. 9, 1936)‡	.80
Maljamar, N. Mex. (Jan. 9, 1936)‡	.80
Fort Collins and Wellington, Colo. (Jan. 9, 1936)‡	See Note
Florence, Colo.	.98
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.88
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont. (June 5, 1936)	1.15
Cat Creek, Mont.	1.28
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duval by Texas Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Gretа, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La., (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

Middle Western States

OHIO OIL CO.

Lima (Sept. 22, 1936)	$1.15
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)*	1.23
Midland, Mich. (Sept. 16, 1936)*	1.32
West Branch, Mich. (Sept. 16, 1936)	1.16
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Simrall Corp. and Pure Oil Co. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$.75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Stanard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana, El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE LINE CO

(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.

(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Sept. 18, 1936)	1.32

PENNZOIL CO.

(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.42
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.41
Includes Titusville district.	
Group C	2.40
Includes Turkey and Tidioute districts.	
Group D	2.39
Includes Bear Creek and Porkey districts.	
Group E	2.36
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.

(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clean naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.55

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$ .895

*F.o.b. ship, based on August transactions and exclusive of production and export taxes and bar dues.

William B. Heroy, chief geologist for the Consolidated Oil Company, New York City, was in Tulsa for a few days the latter part of last week.

H. P. Bostaph has returned to Chatham, Ontario, from a trip to Pennsylvania, and will leave shortly for his home in Yreka, Calif.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.93	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.83	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. Santa Paula and Orcutt posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Beiridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforsheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1936 High	1936 Low	Week ended Sept. 26 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	1,700	92½	90½	92½	Amerada Corp.	788,675	N.P.	50cQ	7-31-36	$2.00	80	48½	55⅝	39
35⅛	26⅝	10,200	28⅝	27⅛	27⅛	Atlantic Refining	2,664,904	$25	25cQ	9-15-36	1.00	28	20½	35¼	21½
20	14¼	3,300	18	17½	17⅞	Barnsdall Corp.	2,131,090	$5	20cQ	11-2-36	‡.20	14¾	5⅞	10	5⅞
23⅜	14	52,500	21	19	19¼	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅜	19¼	6⅝
15¼	11½	54,400	13⅜	13¼	13½	Consolidated Oil Corp.	13,983,287	N.P.	40cQ¶	11-16-36	.25	12¼	6½	14¼	7¼
33¼	28⅛	52,100	33¼	30⅝	32⅝	Continental Oil of Delaware	4,682,671	$5	50cQ¶	10-31-36	.62½	35	15½	22¾	15⅝
34⅜	21	2,500	25½	24½	24⅝	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11⅜	23½	12
12¼	6⅜	10,700	9⅜	8¾	8⅞	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
24⅜	17¼	29,400	24⅜	22⅝	24⅝	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14¾	9¼
26¼	16¾	2,500	20¼	19	20	Mission Corporation	1,399,345	N.P.	....	.....	....	17¾	10⅜	..	..
69½	19⅞	6,800	62	59	62	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12¼	15,100	13¼	12⅝	12⅝	Ohio Oil Co.	6,563,377	N.P.	25cSA	6-15-36	.30	14¼	9¼	15⅞	8½
18	11¾	2,000	15¼	14½	15	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6¾	9⅜	5½
4¼	1⅜	600	2⅛	2	2⅛	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
48⅜	38⅛	48,600	43⅜	40	42½	Phillips Petroleum	4,152,836	N.P.	50cQ¶	9-1-36	1.25	40	13¾	20¾	13⅜
17⅛	11⅞	3,600	16⅝	16⅛	16⅜	Plymouth Oil Co.	1,050,000	$5	25c	9-30-36	.25	13	6½	16⅜	7¼
24⅞	16	32,200	18	16⅝	16¾	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
43⅝	30½	10,500	33¾	31¼	31½	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	9-15-36	1.00	36⅞	20¾	38⅝	20⅝
21¼	14⅜	55,300	24	22½	22½	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
124¼	110½	5,000	122½	121⅜	121½	Shell Union Oil pfd.	400,000	$100	1.37½	7-1-36	....	111	63⅛	89	57
6¾	3½	2,700	4¼	4⅛	4⅛	Simms Petroleum	461,698	$10	1.25 liq.	7-20-36	11.75 liq.	18¾	4¾	17⅛	7¼
31½	19½	5,500	28⅜	26½	28	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	12½	56,400	14¼	13½	13¾	Socony-Vacuum	31,151,075	$15	25cSA	9-15-36	.30	15¾	10⅝	19⅞	12½
47⅝	35	21,900	36½	35⅝	35⅝	Standard Oil of California	13,014,754	N.P.	30cQ¶	9-15-36	1.00	41⅛	27¾	42⅞	26½
40¼	32¾	12,700	38⅛	37½	37⅝	Standard Oil (Indiana)	15,215,677	$25	25cQ†	9-15-36	1.00	33⅜	23	32¾	23¼
30	25	400	26½	26⅜	26½	Standard Oil of Kansas	200,000	$10	....	10-31-34	....	32	20	41	26
70	51⅛	29,700	62¾	61	61½	Standard Oil of New Jersey	25,856,081	$25	75cSA¶	6-15-36	‖1.25	52⅜	35¾	50⅛	39¼
91	72	900	78	77	77	Sun Oil	1,733,013	N.P.	25cQ	9-15-36	$1 & 7% Stk.	77	60½	74¼	51½
40	28⅞	19,400	38¼	36⅞	37⅛	Texas Corp.	9,340,069	$25	25cQ†	10-1-36	1.00	30¼	16½	29⅜	19⅝
15¼	7½	9,000	12¼	11½	11½	Texas Pacific Coal & Oil	880,703	$10	25c	8-1-36	....	9¼	3¼	6½	2½
19⅛	14¾	38,500	19	17⅞	18½	Tide Water Associated	5,642,342	N.P.	15cQ	9-1-36		15⅞	7⅝	14⅜	8
106½	100⅝	1,000	104¼	102½	102½	Tide Water Associated pfd	626,221	$100	$1.50Q	7-1-36	$6.50	104½	84	87	64½
28½	20¾	7,500	22⅛	21½	21½	Union Oil of California	4,386,070	$25	25cQ	8-10-36	1.00	24	14⅜	20½	11½
31⅝	22⅝	800	28	27⅜	27⅜	Union Tank Car Co.	1,200,000	N.P.	30cQ	9-1-36	1.20	26½	20⅞	25⅜	15⅝
5¼	2¾	1,900	3½	3¼	3¼	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3⅛	1	5⅜	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras.

New York Curb Exchange

1936 High	1936 Low	Week ended Sept. 26 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
21	13¼	7,600	20⅝	18⅝	19⅞	Bridgeport Machine Co.	260,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	½
50	39¾	150	45	44¾	44¾	Buckeye Pipe Line Co.	200,000	$50	75cQ	9-15-36	$3.00	42½	30½	38	26
4⅞	1⅞	9,900	2¼	2	2¼	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	105	300	120½	119½	119½	Chesebrough Mfg. Co.	120,000	$25	$1.50Q	9-30-36	6.50	157	115	150	116
7⅜	3	79,100	4⅜	3¾	3¾	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4	⅝	12,900	3¼	2½	2⅞	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	½
4⅛	1½	6,500	2¾	2⅜	2⅜	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34¾	19⅞	10,300	25	23¼	25	Creole Petroleum	6,974,356	$5	25c	7-15-36	.20	23¾	10	14⅜	9⅝
12	9	500	10¾	10⅝	10¾	Darby Petroleum	351,390	$5	25cSA	7-15-36	.50	8⅞	4	7½	4⅛
4⅝	1⅞	800	4	3¾	3⅞	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	¾	2¼	1
44	39	No sales ..	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	8-1-36	4.00	38	33¼	37	30
104¾	72	16,900	104¾	97½	101	Gulf Oil Corp.	4,538,101	$25	25c	10-1-36	....	74¾	50¼	76¾	49⅜
76½	57	4,600	64	61⅝	62½	Humble Oil & Refining (new)	8,923,935	N.P.	50c†	10-1-36	1.25	64	44	49½	33¼
24½	20	14,800	21⅜	20½	21¼	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-36	1.25	22½	15⅜	17⅞	12⅝
9¼	5½	1,200	9½	9⅛	9¼	Indiana Pipe Line	300,000	$10	40cSA†	11-14-36	.35	6⅛	3⅝	6⅞	3⅝
39⅝	32⅞	11,800	35¼	34⅜	35	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-36	2.50	39¾	28	33⅜	19⅝
15⅜	9⅞	7,000	12⅜	11⅝	11⅞	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	6-15-36	.10	11⅜	4⅜	5	2¼
15	7⅜	2,300	15¼	14½	14½	Lion Oil Refining	270,000	N.P.	50c	10-15-36	....	8⅛	3½	6	3⅜
14¼	9⅞	5,700	13⅜	13⅜	13¾	Lone Star Gas	5,382,723	N.P.	20cSA	8-15-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	500	5¾	5½	5½	Mountain Producers	1,682,182	$10	30cSA	7-1-36	.90	5¾	4⅛	5½	4
23	17⅝	2,400	20½	20	20	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-36	1.25	20	11¾	18⅛	13⅛
15⅜	9¼	900	11⅝	11¼	11½	National Transit	509,000	$12.50	40cSA	6-15-36	.75	10⅝	6¾	9½	7
4½	2⅞	900	3¼	3	3¼	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1⅜
6⅝	1⅝	1,200	3½	2⅞	3½	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
6¼	4½	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4⅜	3
9¼	4⅞	500	9	9	9	Northern Pipe Line	120,000	$10	15cSA	7-1-36	.50	8	5¼	7	4⅝
6⅝	3¼	20,700	5¼	4⅞	5	Pantepec Oil	1,608,700	N.P.	....	.....	....	4⅝	1¼	2⅝	⅞
19¼	4½	2,900	16⅛	15¼	15⅜	Root Petroleum Co.	336,045	$1	25c	8-1-36	....	5	1½	..	..
4⅜	1⅞	400	3¼	3¼	3¼	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3⅜	⅞
10	6	4,000	6⅞	6	6¼	Salt Creek Producers	1,496,859	$10	40cSA	6-30-36	1.20	7½	5½	7⅞	5½
40½	32½	4,200	40⅞	39¾	39⅞	South Penn Oil	1,200,000	$25	60c†	9-30-36	1.35	34½	21⅝	26½	17½
7⅞	3¼	No sales ..	..	..	..	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5	3⅞	5½	3½
60	54	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1.00Q	10-1-36	5.00	56	44¼	47	41
23⅜	17⅛	3,100	19¼	18¾	18⅞	Standard Oil of Kentucky	2,604,790	$10	35c	9-15-36	1.25	24	18	18⅜	14⅝
14⅝	11	700	12¼	12	12¼	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7¾	16⅞	8¼
36¼	21¾	1,800	31	30	30¼	Standard Oil of Ohio	753,740	$25	25c	10-15-36	....	23¾	11½	28½	12¼
5	2⅝	8,000	3⅝	3⅜	3½	Sunray Oil	1,610,810	$1	....	4-15-31	....	2⅞	⅞	2	⅛
9¾	5½	700	5¾	5½	5¼	Texon Oil & Land	336,028	N.P.	15cQ	9-30-36	.60	6⅞	5	11	4⅜
7¼	4⅝	25,500	6¼	5	5⅜	Texas Gulf Producing Co.	888,085	N.P.	....	12-29-34	....	4¾	2½	7	3⅜

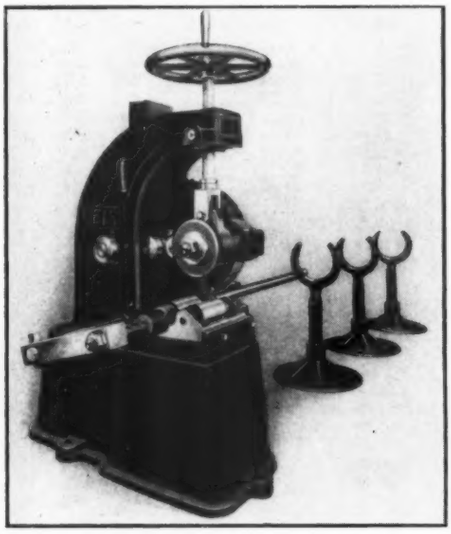
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups

NEW OR IMPROVED EQUIPMENT

Improved Type of Geist Roller Pipe-Cutter Is Introduced

An improvement of interest to the trade has been made recently on the No. 4 Geist roller pipe-cutter, which is marketed exclusively by the Landis Machine Co., Waynesboro, Pa. The shaft which carries the disc cutter is now mounted in Timken



roller bearings instead of bronze bushed bearings as formerly. This makes a stronger construction, insures longer life, and eliminates the need for making frequent adjustments to compensate for wear.

The added rigidity of this mounting as well as the precise alignment obtained between the cutter-shaft and the rollers minimizes cutting-off time, reduces the burr thrown up on the pipe, and increases the life of the disc cutter.

The No. 4 Geist roller pipe-cutter, as shown by the accompanying photograph, has a total capacity for cutting off pipe within a range of one-quarter inch to 4 inches, inclusive. All No. 4 machines are now being shipped equipped with the Timken roller-bearing cutter-shaft.

Bulletins, Booklets and Other Literature for the Trade

Zero Hour Bomb Co., 617 Wright Building, Tulsa, is supplying on request a copy of a 24-page service bulletin by Paul F. Lewis on "Proper Sequence of Operations to Insure Maximum Return on Investment in Acidizing Process."

A helpful article on use of the gun perforator in completion of wells in the Samfordyce field is reprinted in the current issue of Hot Shots, published by the Lane-Wells Co., Los Angeles, Calif.

Besides describing and illustrating the complete line of Beaver pipe tools, an attractive 40-page catalog prepared by Beaver Pipe Tools, Warren, Ohio, gives a brief and interesting account of the company's rise from small beginnings in 1900.

Two new bulletins are announced by Worthington Pump and Machinery Corp., Harrison, N. J., one on type UB two-stage volute centrifugal pumps and the other on type AN single-direct-acting air-cooled air-compressors.

Details concerning the Baker cement retainer model F, which can be used also as a casing bridge plug, is given in a large loose-leaf catalog designated as the "Baker Broadcast" and obtainable from Baker Oil Tools, Inc., Huntington Park, Calif. The catalog contains engineering information on oil-well cementing.

Wilson Manufacturing Co., Wichita Falls, Tex., has prepared an illustrated bulletin on the Wilson Giant Model portable rig. A picture shows the rig and crew which broke the record for New Mexico drilling.

Mimeographed copies of "An Impartial Review of Geophysical Data on the Oil Content of Soils" are being sent free to those interested by Geological Scientific Service Co., 957 East Davis Street, Fort Worth, Tex.

The properties and applications of heat-treated wrought nickel-alloy steels are discussed in a 16-page illustrated booklet which the International Nickel Co., 67 Wall Street, New York, is sending on request.

The J. & S. Carburetor Co., Dallas, Tex., is mailing on request a four-page bulletin on the company's gas mixing valve.

Jack Mathews Is Now Member of Braden Steel's Sales Staff

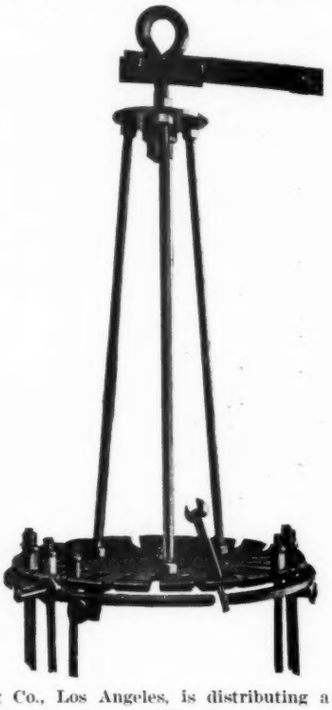
J. G. (Jack) Mathews, widely known in the oil industry, has joined the sales staff of the Braden Steel Corp., Tulsa. Jack formerly was with the engineering staff of the Kansas City Structural Steel Co. He joined that organization in June, 1916, and with the exception of two years

J. G. MATHEWS

in the army, was in its service 16 years. Ten years of this time was spent as a contracting engineer, with headquarters in Tulsa, and as a result he has a wide acquaintance among engineers, purchasing agents, and builders. Before joining the Braden Steel Corp. he was employed in the refinery engineering department of the Phillips Petroleum Co.

Sucker-Rod Hanger Is Made for Modern Deep Well Drilling

Two problems in designing a sucker-rod hanger for modern deep wells are correct structural capacity and safety features. The Axelson Manufac-



turing Co., Los Angeles, is distributing a safety hanger which it says will not only rack approximately 6,000 feet of rods weighing from 7,000 to 14,000 pounds, but will do it with safety to both operators and equipment.

Swiveled on Timken roller bearings, the hanger is easily revolved to alignment with the elevator, and the rods are slipped into the slots and locked by the safety ring. This ring locks all the 22 slots simultaneously and cannot be accidentally disturbed after it has been set by the rod-wrench. Convenience and speed are obtained by the ease with which the hanger can be revolved to face the elevator, and safety results from the fact that the rods are locked in before they are released.

New Type Reinforcement Adds to Strength of Rotary Hose

U. S. Rubber Products, Inc., 1790 Broadway, New York, has announced a new type of wire reinforcement and a new style of reinforced end on its Matchless and Peerless brands of rotary hose. The wire reinforcement, which has increased the resistance to bursting many hundred pounds, consists of multiple plies of extra-heavy duck: and in the case of Matchless three plies, and Peerless two plies of a new type wire spiraled in opposite directions by a special method. Each ply of wire is embedded in rubber and carefully insulated from the other by a ply of rubberized duck. The cover is of abrasive-resisting rubber, unusually thick.

Because the areas at the ends are where hardest service occurs, a new method of end reinforcement which extends back 36 inches has been developed. This reinforcement consists of an extra ply of wire and numerous plies of heavy duck to take the strains of couplings, vibration, bends and high pressure. At the same time none of the flexibility has been sacrificed.

Fred Stone Sails on European Business and Pleasure Trip

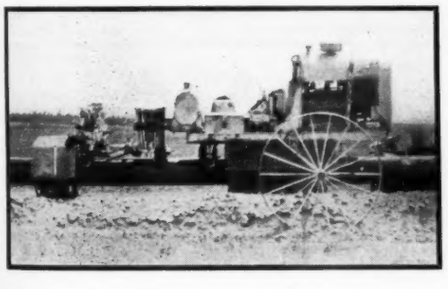
Fred Stone, chairman of the Hydril Co., has sailed for Europe on a combined business and vacation trip. Accompanied by Mrs. Stone, he left Los

FRED STONE

Angeles by steamer late in July bound for the Panama Canal. He will make stops in the oil fields of Colombia and Venezuela, later proceeding to London, England. After a short stay in London, Mr. and Mrs. Stone will tour the British Isles, Norway, Sweden and the continent, returning to London early in October, where they will remain for several weeks. Mr. Stone expects to be back in his office after November 1.

Rapid and Clean Priming Job Assured by New Machine

The new W-K-M priming machine can be operated either by hand cranking to propel along the line or hooked onto standard pipe-cleaning ma-



chines. A 4-horsepower air-cooled Briggs-Stratton motor furnishes power to rotate steel and fiber brushes around the pipe at 110 r.p.m. to spread the primer thoroughly over the pipe surface. The resulting job, according to the manufacturers, is free from runners in the primer, assuring a cleaner, quicker job than that done by hand application.

One of the features of this priming machine is its convertibility to a cleaning machine by substituting a cleaning head for the primer head.

Here and There With Men Who Manufacture Equipment

Harry C. Hicks has been appointed sales manager of the Chicago district by the New York Belting & Packing Co. with which he has been associated since 1913.

Willis F. Avery has been elected assistant secretary of the B. F. Goodrich Co., in charge of patent, trademark and copyright work. Since joining the company in 1924, he had been in charge of chemical and compounding cases in the company's legal department.

H. M. Daniels, eastern sales division supervisor for the Four Wheel Drive Auto Co., Clintonville, Wis., for the last 13 years, has been elected a second vice president of the company.

W. I. Brockson was elected vice president of the Commercial Advertising Agency, Chicago, which he joined two and a half years ago as an account executive.

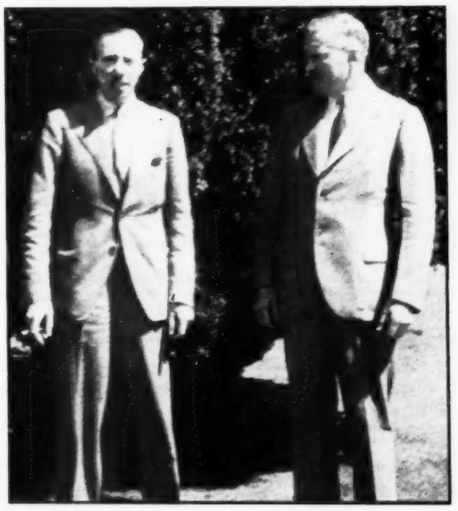
Boetticher-Kellogg Co., Evansville, Ind., has been appointed a jobber of the complete line of tubular goods manufactured by Republic Steel Corp., Cleveland, Ohio.

H. H. Steck, formerly of the Norton Co., has been appointed grinding wheel sales representative for United States Rubber Products, Inc., in the Pittsburgh, Pa., district.

The Buda Co., Harvey, Ill., builder of internal-combustion engines, has appointed Walter A. Parrish chief engineer to succeed the late Carl C. Hinkley, and L. C. Moxie assistant chief engineer.

Studies American Methods

Anthony Bruyaux, of Brussels, Belgium, recently arrived in this country, accompanied by Kenneth M. Leach, son of the managing director



Anthony Bruyaux (left) and Col. W. F. Rockwell

of the Audley Engineering Co., Ltd., of Newport, Shropshire, England, and F. Appleyard, research and development engineer for the same company. The Audley organization is manufacturing licensee for Nordstrom lubricated plug valves. Mr. Bruyaux, European representative for the Merco Nordstrom Valve Co. and the Pittsburgh Equitable Meter Co., has inspected a number of gas plants and production fields. Returning to the Continent, he expects to be joined by Col. W. F. Rockwell, president of the American concerns.

Pump Makes 12-Year Record

An interesting story on the service of an Axelson pump was recently received by the Axelson Manufacturing Co., Los Angeles, Calif. On February 6, 1924, the Colorado Oil Co. installed a 2-inch (1¾-inch) by 6-foot Axelson OC regular tubing sectional liner pump. It was pulled on July 6 of this year after a run of 12 years, 5 months, 26 days. Pumping at 13 strokes a minute with a 20-inch stroke, the total number of strokes was 65,202,440. The plunger traveled 284,008,133.32 feet, or 53,789.42 miles. Total days of pumping was 4,542 with down time of 10 days in this period. During this long run five oversize plungers were used, each averaging more than two years. The pump lifted 13,626 bbls. of oil in this time.

John Gribbel, Long President of American Meter Co., Dies

John Gribbel, banker, manufacturer, and civic leader, who was for 53 years prominently identified with the gas industry, died at his summer

JOHN GRIBBEL

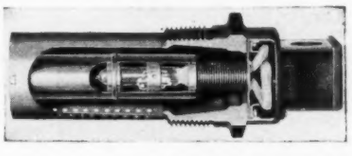
home "Weatherend" at Camden, Me., August 26. Mr. Gribbel, who was 78, had given up the post of president of American Meter Co. last May, to become chairman of the board. Last January he also retired as president of the Tampa Gas Co., a position held since 1911, to become chairman of the board.

Following an early experience in banking, Mr. Gribbel entered the firm of Harris Griffin & Co., gas meter manufacturers, in 1883, and soon became the directing head. Later he entered the succeeding firm, John J. Griffin & Co., and in 1892, when Mr. Griffin died, Mr. Gribbel bought out his interests and continued as head of the business which later combined with other units, incorporating in 1895 as American Meter Co.

Liquid Level Is Controlled by New Float-Operated Switch

A float-operated switch for the checking or control of liquid levels has been developed by McDonnell & Miller, Wrigley Building, Chicago. The working mechanism, as shown by the accompanying cut-away view, consists of a mercury switch inside of the float which is attached to the head by means of a flexible metallic bellows. As the float switch moves through its arc the mercury switch makes and breaks contact.

The unit shown in the illustration can be screwed in a horizontal position directly into a tank or vat at any desired height. When the liquid level reaches a height that will move the float the mercury switch makes contact to sound



an alarm, light a warning light, or may be used to start up a motor-operated pump or other electrical device. It may also be installed at a predetermined low level to cut in a motor-pump unit or sound an alarm as required.

This particular unit is widely used by boiler manufacturers as a low water cut-off switch to stop an oil burner or stoker when the boiler water level falls to the danger point. A device of similar design is equipped with a three-wire switch so that it makes one circuit and breaks another when the float is moved through its arc by rising or falling liquid level.

West Texas Fields

(Continued from Page 91)

found one-half mile to the north in the pool. If it proves a producer it will give the second producing horizon for the pool and lead to deeper drilling in the area, abandoned tests at the regular depth being deepened to pick up this new pay. Its outcome will soon be known.

NORTH TEXAS COMPLETIONS

Archer County

Bob Elmore No. 1 O. L. Kunkel, 1,445 feet, dry. Kork Kelly and others No. 1 J. D. Powell, 1,388 feet, dry.

Baylor County

Petroleum Producers Co. No. 35 W. H. Portwood, 1,407 feet, dry.

Cooke County

J. L. Anderson and others No. 3 F. A. Bruhlmeyer, 2,056-72 feet, 314 bbls; No. 4 F. A. Bruhlmeyer, 2,075-89 feet, 94 bbls. Danciger Oil & Refining Co. No. 3 Jacobs, 1,515 feet, dry. Denver Producing & Refining Co. No. 3 Ed Wilson, 1,964-94 feet, 440 bbls. F. W. Merrick, Inc., No. 12 G. A. Stelzer, 807-40 feet, 1 bbl., key well. United Producers Co. No. 5 R. W. Trew, 1,115-32 feet, 24 bbls.

Jack County

W. W. Connell No. 1 Moore & Swasey, 375-77 feet, 10 bbls.

Wichita County

Forbess & Golden No. 1 C. A. Mertins, 710-21 feet, 8 bbls.

Wilbarger County

Phillips No. 2 Waggoner NXN, 2,526-36 feet, 343 bbls.

Young County

L. T. Burns No. 5 Rushing, 899-908 feet, 60 bbls. Cato Oil Co., Inc., No. 1 G. B. Hamilton C, 922 feet, dry. Hamilton and others No. 15 Jeffery, 854 feet, dry. L. G. Hawkins No. 15 J. M. Kirkland, 703-46 feet, 8 bbls. Kleiner and others No. 13 Graham, 678-87 feet, 10 bbls. Lupton & McLester No. 1 Choate, 3,600-33 feet, 317 bbls. Stovall, E. C., No. 18 Stovall, 3,973-4,070 feet, 100 bbls. West & Honea No. 3 Stewart, 812-39 feet, 25 bbls.

PANHANDLE COMPLETIONS

Gray County

Stanolind Oil & Gas Co No. 3 Merten, pay 3,220-40 feet, total depth 3,277 feet, recompleted, 183 bbls.

Hutchinson County

Phillips Petroleum Co. No. 7 Perkins, oil pay 2,955-75 feet, total depth 2,989 feet, shot, 314 bbls. Shell Petroleum Corp. No. 1 Wisdom, oil pay 3,125-86 feet, total depth, shot, 621 bbls. Stekoll Oil Co. No. 8 Whittenburg "H," oil pay 2,932-65 feet, total depth 2,968 feet, shot, 344 bbls. Travelers Oil Co. No. 2 Haile, pay 2,972-3,044 feet, total depth 3,080 feet, shot, 589 bbls. Turman Oil Co. and others No. 3 Whittenburg "B," pay 2,677-2,745 feet, total depth, shot, 515 bbls. U-Tex Co. No. 6 Ware "A," pay 3,010-80 feet, total depth 3,089 feet, shot, 688 bbls.

Moore County

Phillips Petroleum Co. No. 2 Moore "66," pay 3,428-32 feet, total depth 3,432 feet, 225 bbls. on pump.

Wheeler County

Dumar Oil & Gas Co. No. 1 Wallace, pay 1,722-1,800 feet, total depth 1,805 feet, produced 47,266,000 feet of gas. Palmer and others No. 1 Valencik, gas pay 2,010-2,230 feet, total depth 2,233 feet, 25,343,000 feet of gas.

Rocky Mountain Runs

Production estimates of Rocky Mountain fields for the week ended September 26 were as follows:

WYOMING

	Bbls.
Salt Creek	16,150
Big Muddy	1,490
Badger Basin	40
Black Mountain	170
Byron	1,190
Dallas Derby	600
Dutton Creek	60
Elk Basin	500
Ferris	20
Frannie	900
Garland	500
Grass Creek	1,700
Hamilton dome	1,210
Hidden dome	130
Hudson	300
LaBarge	1,120
Lance Creek	5,810
Lost Soldier	1,080
Mule Creek	50
Midway	30
Oregon Basin	4,220
Osage	820
Pilot Butte	30
Quealy dome	70
Rock River	1,400
South Casper	520
Poison Spider	190
Simpson Ridge	20
Teapot	20
Total Wyoming	40,340

MONTANA

Buckley Border	70
Cat Creek	750
Cut Bank	9,120
Dry Creek	410
Kevin-Sunburst	4,300
Lake Basin	40
Pondera	1,280
Total Montana	16,030

COLORADO

Florence	190
Fort Collins and Wellington	210
Iles dome	3,670
Moffat	440
Orchard	70
Rangely	60
Tow Creek	160
Total Colorado	4,900

NEW MEXICO

Artesia	700
Cooper	7,250
Eunice	23,920
Hobbs	22,180
Hogback	300
Jal	3,300
Lea	1,220
Maljamar	2,310
Monument	15,020
Rattlesnake	940
Table Mesa	100
Total New Mexico	77,240
Total Rocky Mountain region	138,510

East Texas Fields

(Continued from Page 90)

in 20 minutes. Humble Oil & Refining Co. No. 12-A Barksdale, 3,797-99 feet, 71 bbls. per hour.

Upshur County

Nivia Oil Co. No. 2 Morgan, 3,709-19 feet, 20 bbls. per day on pump. Killingsworth Oil Co. No. 8 Callahan, dry and abandoned 3,676 feet. Stanolind and others No. 25-C Flewellen, 3,728-33 feet, 11 bbls. in 15 minutes.

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Royalties—Production

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Enid Oil Royalty Company
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OIL Royalties bought and sold by Petroleum Engineers. W. M. Hauser, Consulting Engineer, 901 World Bldg., Tulsa, Oklahoma.

Structure 15 miles wide, 40 long. Land selling at $2.00 per acre. H. C. Petersen, Route 5, Omaha, Nebraska.

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After a very busy summer, making surveys and mapping oil and gas deposits in Michigan, Ohio and Pennsylvania, where leasing and drilling plans are now in progress, due to many requests, we are planning a trip to the South West this Fall. We solicit correspondence to arrange personal interview.

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Cleveland, Ohio

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GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

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Oilfield and County Ownership Maps. New price list on request. Send $1.00 for map of Texas and eastern New Mexico.
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KEY HEADERS, sizes for 3½" and 4½" OD tubes, ideal for cracking, reforming, viscosity breakers, etc. Large stock up-to-date refinery equipment. Priced for quick sale.

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Several Steel Derricks & Rotary Equip.

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Westcott, Foxboro and Emco Orifice Meters, Large Capacity Iron Case, Sprague and Ironclad Positive Meters. Geo. R. Milner, Okmulgee, Oklahoma.

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2—12" Model 44 Barber-Greene trenching machines, like new; cheap.

1—6" Model 44 Barber-Greene trencher, condition fair.

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FOR SALE—Standard Cable Drilling Tools. 2—12x12 Out-board Steam engines. 2 Boilers—66 and 60 H.P. Tools and equipment from 5⅜" to 24" hole, less pipe, cordage and belts. W. A. BLACK, Owner, Box 323, Pampa, Texas.

BARGAINS—Demonstrator Arc Welders. Gasoline and electric drive. 30 days' trial. Easy terms if desired. Write Ken's Exchange, Box OG-106, Troy, Ohio.

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TANK CARS WANTED — Responsible refinery wants to buy direct from owner 50 to 100 clean 8,000 gallon tank cars, not over 12 years old, equipped with cast steel side frames, delivered free of excess empty mileage at Kansas City or St. Louis. Advise builder, year built and complete specifications. H. W. Lee, P. O. Box 601. 1134 Hunt Building, Tulsa, Oklahoma.

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145 A. in Sec. 32-10N-4West
90 A. in Sec. 32-10N-4West
110 A. in Sec. 32-10N-4West
225 A. in Sec. 6-8N-5West

E. E. McDowell, Verden, Okla., R. 1

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OIL OPERATOR with geological and engineering experience owns leases in Nowata field he wants to repressure by water flooding. Have plenty good clear water that can be conditioned and used at very low cost. Wants $100,000. Will pay back the $100,000 plus 6% out of first oil produced and give ½ interest in whole property. Address P. O. Box 142, Tulsa, Oklahoma.

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NORTH Louisiana is oil active, write for drilling blocks, leases, production. G. Lucas, 208 Milam St., Shreveport, La.

WANTED—Core Drilling of any nature, anywhere. Have latest equipment. Will take interest deals with any reliable independent operators. Paul R. King, Box 341, Hutchinson, Kans.

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Situations Wanted

PURCHASING AGENT

Or ACCOUNTANT, fifteen years experience purchasing for Mining and both Producing and Refining Oil Companies. Twelve years Accounting Railroad and Financial Institutions, Address Box H-451, The Oil and Gas Journal, Tulsa, Okla.

SITUATION WANTED — Salesman with 20 years' experience in oil and gas sales work in the southwest desires connection with manufacturing concern. Available October 1st. Salary preferred. References. Address Box H-431, The Oil and Gas Journal, Tulsa, Oklahoma.

Situations Wanted

CIVIL ENGINEER, surveyor, over nine years with an oil company in South America, seeks similar position. Mapping, topographical surveys in connection with civil engineering works; drainage, flood control, roads, railroads. Also experience on reinforced concrete work. Address Box H-454, The Oil and Gas Journal, 415 Lexington Ave., New York City.

ACCOUNTANT: 13 years experience in oil, from field warehouse to manufacturing costs, tax and other reports compiled. G. W. Elliott, 430 Bedell Bldg., San Antonio, Texas.

Help Wanted

WANTED—An experienced tank man, one that understands welded tank work and must be experienced in erecting tanks. Pipe & Mining Supply Co., Box 1431, Denver, Colorado.

WANTED—Draftsman—College graduate in electrical engineering. Very desirable that applicant have experience in instrumentation. State degree received, school attended, past experience, age, telephone number and send photograph if available. Address Box H-452, The Oil and Gas Journal, Tulsa, Oklahoma.

SCOUTS and ENGINEERS—Learn how Big Chief System locates structures. Certain, scientific, inexpensive. Gas & Oil Research Co., Cleveland, Ohio.

PRODUCTION equipment manufacturer (Midwest) wants assistant to president, age 30-35, trained under a successful sales executive, to direct advertising, research, and sales promotional activities. State experience, college, degree, salary expected. Address Box H-461, The Oil and Gas Journal, Tulsa, Okla.

Mailing Lists

MAILING LISTS

Royalty Investors, by Deed. Retail royalty brokers; both by States. Write for folder.

Also, large oil company lease buyers in Tulsa, Wichita, Houston, Dallas and Shreveport. $1 for each city. Oil Industry Mailing List Co., 909 Tulsa Loan Bldg., Tulsa, Okla.

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THE OIL AND GAS JOURNAL

Tulsa, Oklahoma

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Oil Man's Calendar

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5-9—Atlantic City, N. J., National Safety Congress, Petroleum Section.

6-9—Richmond, Va., North American Gas Tax Conference.

8-9—Fort Worth, Tex., Oil and Gas Section, A.I.M.E., Blackstone Hotel.

8-9—Tulsa, National Road Oil and Asphalt Congress, fifth annual session, Hotel Tulsa.

12-13—Chicago, National Association of Lubricating Grease Manufacturers, Stevens Hotel.

13—Tulsa, regional technical meeting, W.P.R.A.

21-22—Indianapolis, Ind., Indiana Independent Petroleum Association, Hotel Severin.

25-30—Atlantic City, N. J., first annual convention, Association of Gas Appliance & Equipment Manufacturers, Annual convention American Gas Association, Atlantic City Auditorium.

27—Wichita Falls, Tex., regional technical meeting, W.P.R.A.

27-29—Chicago, National Oil Marketers Association annual convention, Stevens Hotel.

November

3—Shreveport, La., regional technical meeting, W.P.R.A.

9-12—Chicago, American Petroleum Institute, 17th annual meeting, Stevens Hotel.

20—Tulsa, annual meeting, Kansas-Oklahoma division, Mid-Continent Oil and Gas Association.

November-December

30-Dec. 1—Oklahoma City, Okla., Independent Petroleum Association, Biltmore, annual meeting.

December

4—Houston, Tex., annual meeting, Texas division, Mid-Continent Oil and Gas Association.

5-13—Detroit, Mich., First International Consumers Petroleum Exposition.

6-11—New York, National Exposition of Chemical Industries, Grand Central Palace.

15—Tulsa, annual meeting directors, Mid-Continent Oil and Gas Association.

February, 1937

8-10—Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel.

April

15-16—Cleveland, Ohio, 34th semiannual meeting National Petroleum Association, Cleveland Hotel.

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Forging and treating make it tough . . . this nut has all the strength and stamina that it takes to hold fittings tight, even under temperatures in the vicinity of 1000 deg. F. High-carbon steel forms the foundation of strength. Hot forging adds stamina by knitting and refining the grain. Finally, heat treating, with oil quenching, brings out the full degree of hardness and toughness so necessary for a high-pressure fastening and prepares the nut for service under high temperatures.

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BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY

The Oil and Gas Journal, issued weekly by The Petroleum Publishing Company, 114-116 West Second Street, Tulsa, Oklahoma. Subscription prices: Domestic, $6.00 a year; foreign, $7.00 a year. Entered as second-class mail matter December 15, 1911, at the post office at Tulsa, Oklahoma, under the Act of March 3, 1879.

A COMPLETE JOB

THE B. F. Cowan Tubing Pulling Company, of Refugio, Texas—Telephone Numbers 166-167-270 have provided themselves with the proper equipment—A "CARDWELL ALLSTEEL" Portable Hoist, mounted on it's own truck—Elevators—Slips—Rod and Tubing Lines – Rotary Table and Pump, (The Rotary Table Drive Sprocket is on the Operator's side of the Hoist). They also furnish a full working crew.

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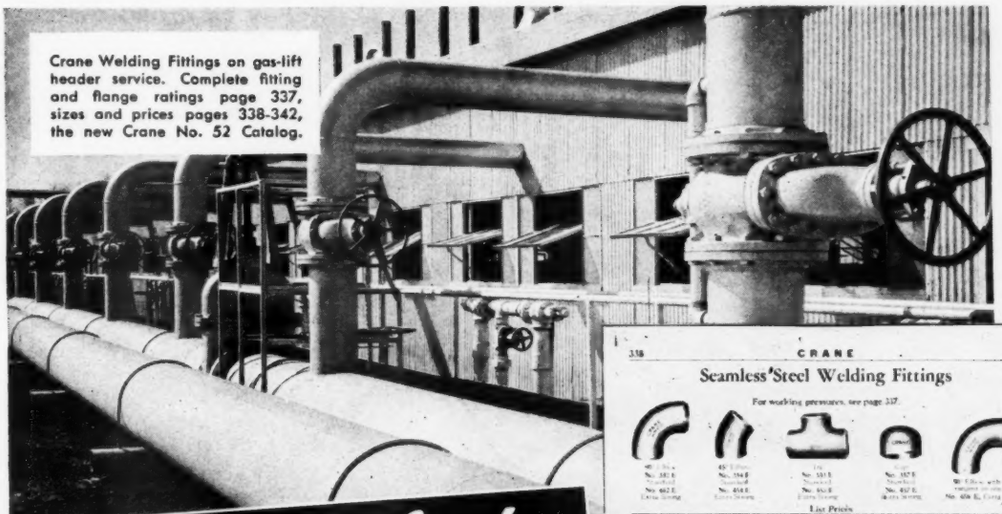
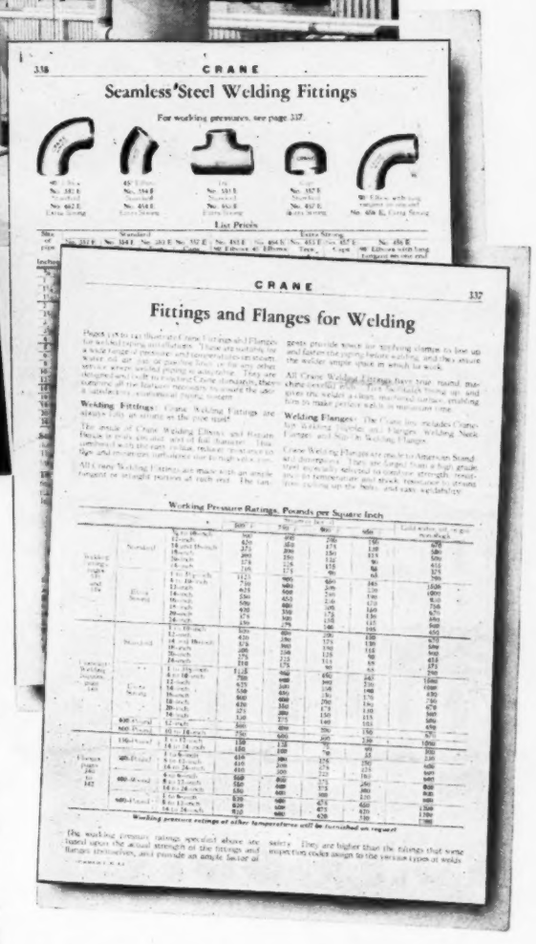


Crane Welding Fittings on gas-lift header service. Complete fitting and flange ratings page 337, sizes and prices pages 338-342, the new Crane No. 52 Catalog.



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VALVES, FITTINGS, FABRICATED PIPE, PUMPS, HEATING AND PLUMBING MATERIAL

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For HEAVY DUTY

Here's a rotary hose specifically designed for deep well drilling. Extra strength and greater flexibility are provided by the improved construction—a combination of especially woven duck used in conjunction with scientifically spiraled wire plies over a highly abrasive resisting rubber tube. This construction eliminates both expansion and elongation.

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FOR AVERAGE DRILLING

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On both Rough Rider and Super Rough Rider Rotary Hose, ends are heavily reinforced and can be furnished with upset (full hole) end design. Available in 2, 2½ and 3-inch sizes in 45, 50 and 55-foot lengths.

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"SERVING THE OIL AND GAS INDUSTRIES"

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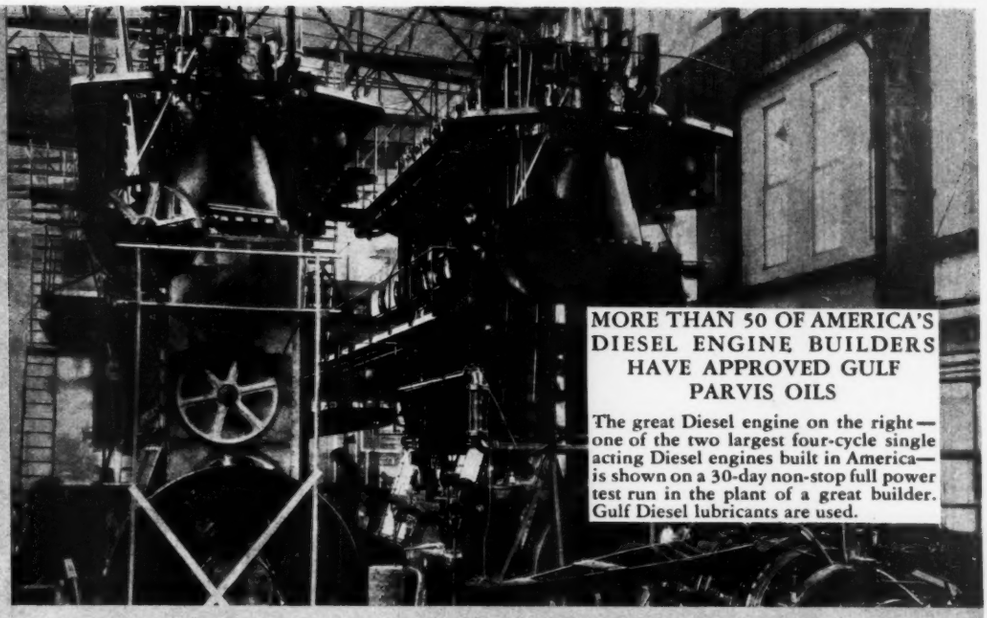
BUILDERS AND OPERATORS agree



MORE THAN 50 OF AMERICA'S DIESEL ENGINE BUILDERS HAVE APPROVED GULF PARVIS OILS

The great Diesel engine on the right—one of the two largest four-cycle single acting Diesel engines built in America—is shown on a 30-day non-stop full power test run in the plant of a great builder. Gulf Diesel lubricants are used.

—AND HUNDREDS OF POWER PLANT OPERATORS USE THEM

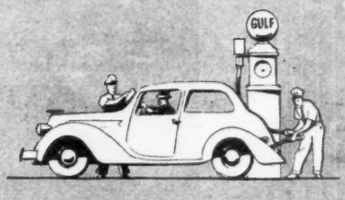
The three large Diesels in this modern plant have been operated with Gulf Parvis Oil since their installation, about two years ago. The management reports low costs for maintenance and lubrication.

GULF PARVIS OILS preserve close tolerances in Diesel Engines

LEADING DIESEL BUILDERS use Gulf Parvis Oil in their plants for engine run-ins and tests before shipment. That speaks volumes for the quality of this Diesel lubricant.

Today's Diesels are built with close tolerances. Moving parts are carefully calibrated to assure close fit and long life. A lubricant of highest quality is needed to minimize wear and maintain the efficiency of the unit from the start.

Gulf Parvis Oils—approved by more than 50 of America's Diesel engine builders—have demonstrated their value in scores of plants from Maine to Texas. They are the most economical Diesel lubricants you can use.



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GULF INDUSTRIAL LUBRICATION

GULF OIL CORPORATION ★ GULF REFINING COMPANY

GENERAL OFFICES: GULF BUILDING, PITTSBURGH, PENNSYLVANIA

Beaumont Timken-equipped Pedestal Sheave Block.

Beaumont Timken-equipped Tubing Block. Manufactured by Beaumont Iron Works Company, Beaumont, Texas.

TIMKEN-EQUIPPED OIL WELL BLOCKS save time

★

Fast-running, non-sticking oil well blocks that do not require constant attention save time and reduce maintenance. They save cables, too.

That is why leading manufacturers of oil well blocks mount the sheaves on Timken Bearings.

Besides eliminating friction and thereby assuring smooth, easy operation, Timken Bearings hold block sheaves in positive alignment; protect them against radial, thrust and combined loads; extend lubrication periods and save lubricant.

Timken-equipped blocks operate with equal efficiency in all weathers because the bearings are completely enclosed and sealed against the entrance of wet and dirt.

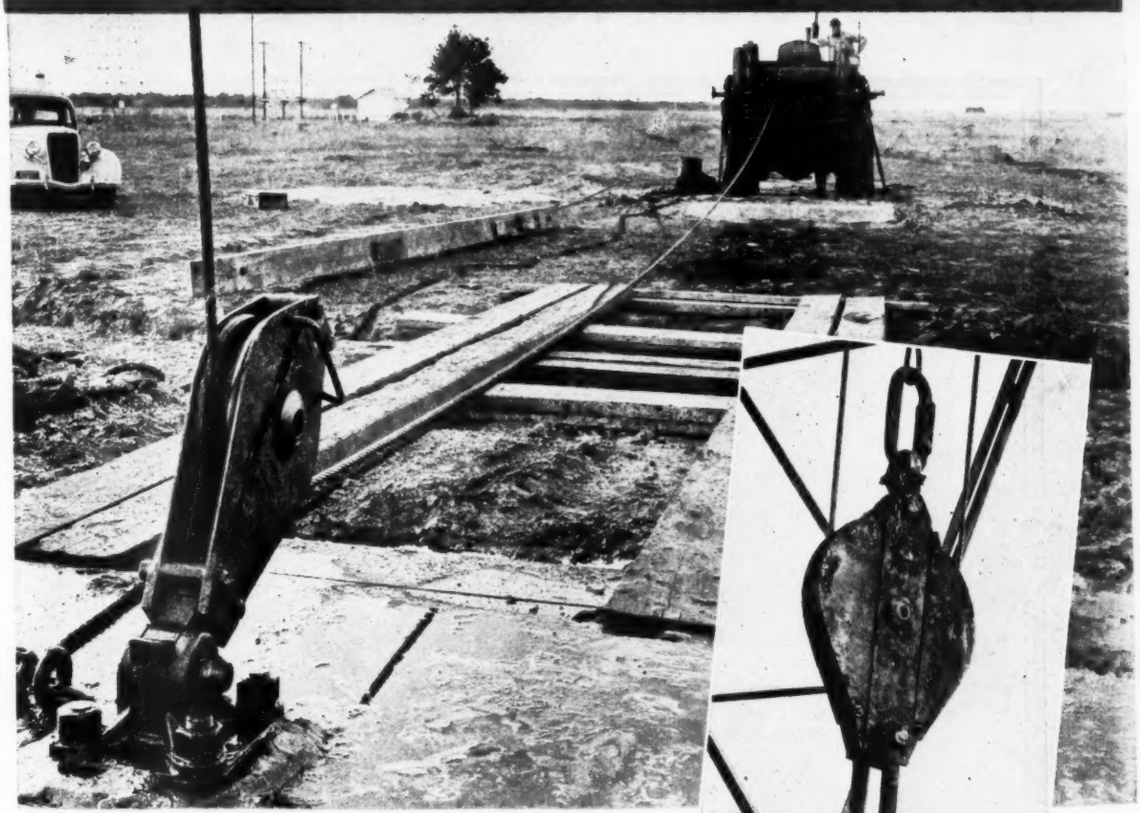
When buying oil well blocks of any type it will pay you to specify Timken Bearings.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *TAPERED ROLLER* **BEARINGS**

Boost PRODUCTION PROFITS

WITH DREADNAUGHT PRODUCTION BLOCKS



DREADNAUGHT Pedestal Sheave Block and Tubing Traveling Block on a tubing job in the Esperson Dome Field, Liberty County, Texas.

DREADNAUGHT Production Blocks have made a hit with men in the field because of their speed in operation, because they are easy to handle, and because they are designed to do the job with greater safety. Men in the office who are concerned with operating costs like them too, because they require less maintenance expense than ordinary blocks.

Sheaves are of slow-wearing high manganese cast steel. The adjustable Timken Tapered Roller Bearings are lubricated through the center pin. The Pedestal Sheave Block swivels and tilts, centering the wire line in the sheave groove at all times, and minimizing wear and tear on the line as well as the block.

Write for fully descriptive literature or see your nearest Frick-Reid Representative.

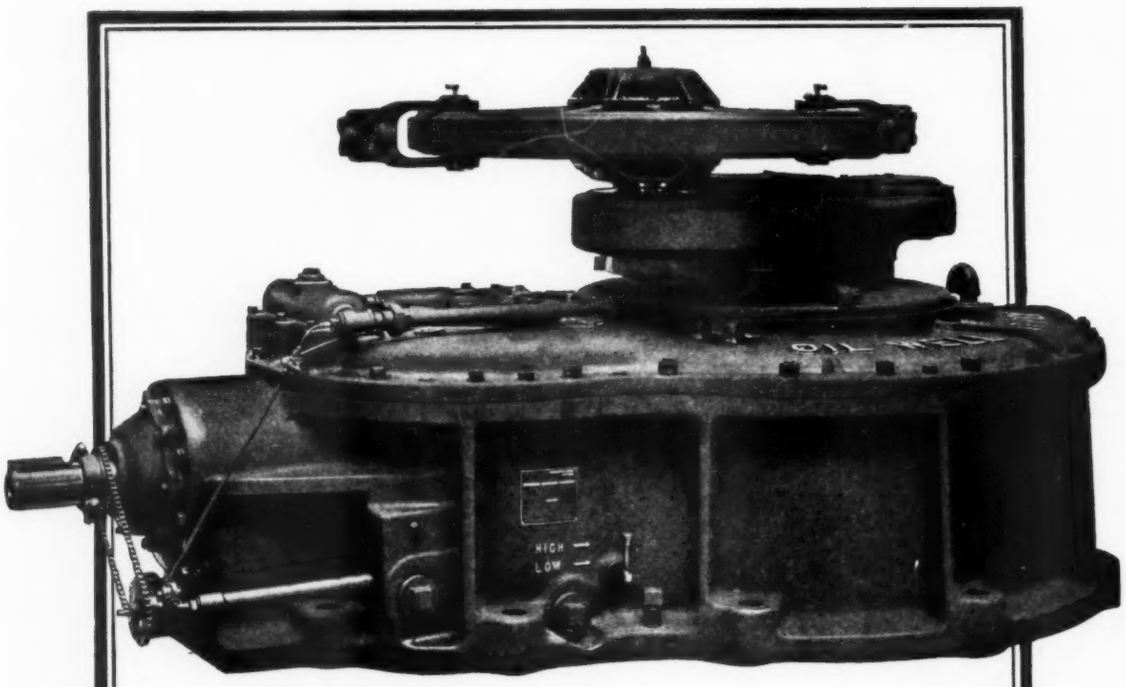
BEAUMONT IRON WORKS CO.

BEAUMONT • HOUSTON • DALLAS • LONGVIEW
and ODESSA, TEXAS — TULSA, OKLAHOMA

DREADNAUGHT

ANNOUNCING-

100 H. P. Geared Power completes line



THIS NEW ADDITION *to the "OILWELL" line of geared powers has many advantages — no housing cost, sturdy construction to withstand continuous heavy duty pumping.*

THE new "OILWELL" 100 H. P. Geared Power completes the range of sizes — 30 H. P., 50 H. P., 80 H. P., 100 H. P. and 150 H. P. units to handle your multiple pumping requirements in any practical combination of numbers and depths of wells. Its efficiency matches that of the entire line.

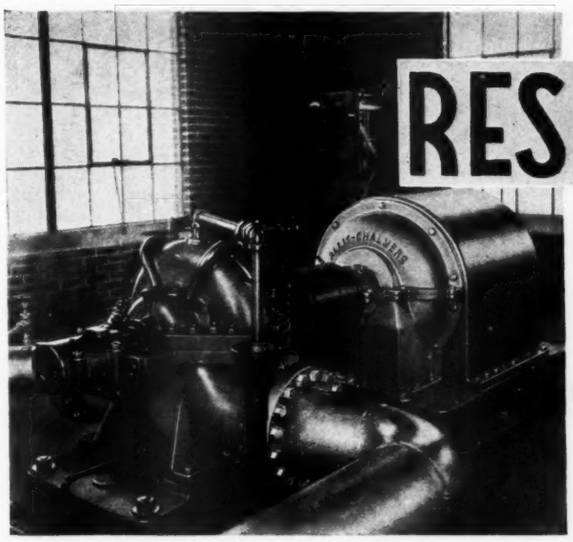
OIL WELL SUPPLY COMPANY

Subsidiary of United States Steel Corporation

Branch Stores in All Oil Fields

"OILWELL"

REG. U.S. PAT. OFF.



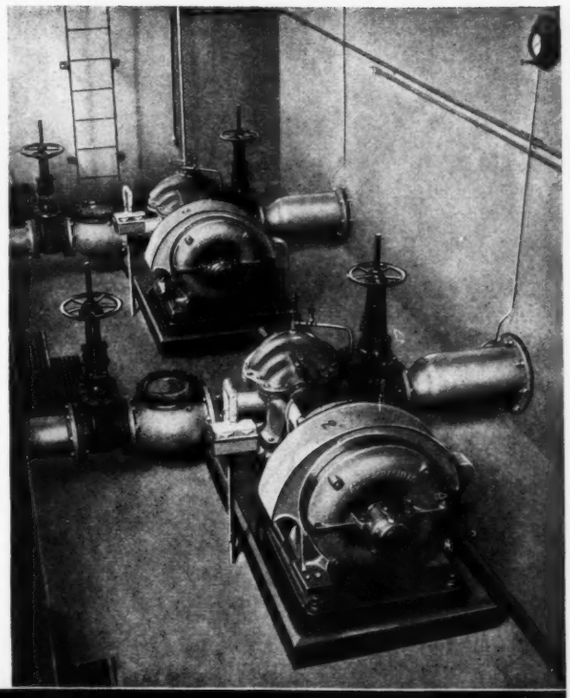
RESPONSIBILITY *Undivided*

Allis-Chalmers 10" x 8" Centrifugal Pump rated 2800 gpm, 396 ft head of crude oil, driven by 300 hp Allis-Chalmers base ventilated, squirrel cage induction motor.

THESE ALLIS-CHALMERS pumping units are giving the utmost in actual pumping value per dollar of actual cost.

And like every pumping unit manufactured by Allis-Chalmers they were designed for the highest possible efficiency—and what's more, selected to operate at their maximum efficiency under the customers' own conditions.

Allis-Chalmers is the only company building complete pumping units, consisting of the centrifugal pump and any type of drive—*and that means there is no divided responsibility... there is no lack of coordination between pump and drive.*

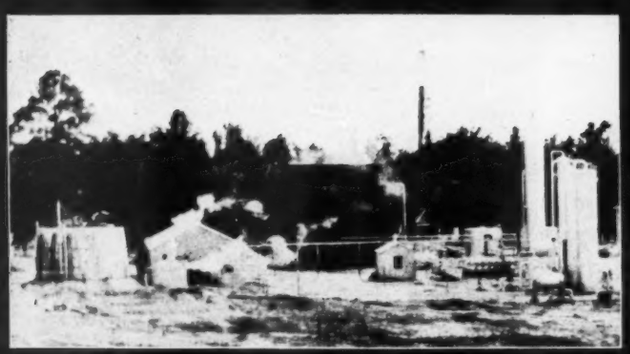


Three Allis-Chalmers Centrifugal Pump Units for water supply to oil refinery, each rated 3500 gpm. 140 ft head, and driven by an Allis-Chalmers 150 hp, drip proof, cage type induction motor.

CENTRIFUGAL PUMPS

ALLIS·CHALMERS

MILWAUKEE WISCONSIN



Annually more Marley water cooling equipment goes into service than any other kind. Marley design, Marley materials, Marley engineering and Marley workmanship have been proved by the test of time.

For efficiency—for economy—for reliability — install a Marley cooling tower.

THE MARLEY COMPANY
1915 Walnut Kansas City, Mo.

MARLEY

WATER COOLING SYSTEMS

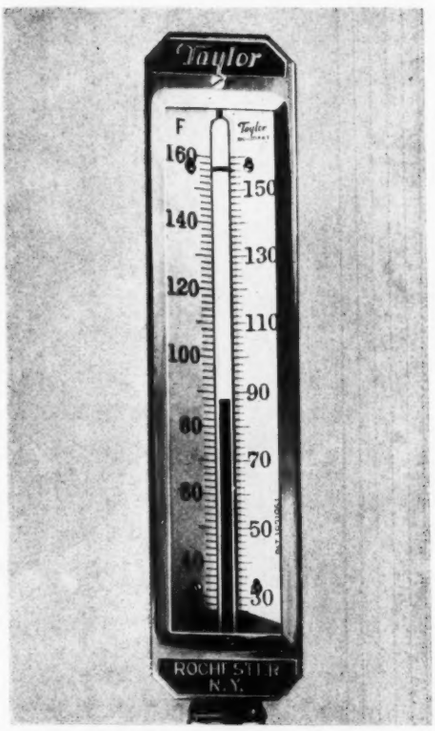
DON'T SQUINT

at your thermometers

Read them now with both eyes open—more easily, more accurately, at greater distances with

NEW TAYLOR

"BINOC" TUBING



THIS IS A PICTURE *of the latest Taylor Industrial Thermometer with the new Taylor "BINOC" Tubing.*

"REMARKABLE!" "Wonderful!" "A really big development!" "The greatest advance of its type in thermometer history."

Unusual praise indeed. But it is praise of an unusual product.

With "Binoc" Tubing, Taylor makes previous industrial thermometers obsolete.

"Binoc" Tubing ends squinting with one eye. It does away with "approximately accurate" readings. It gives thermometers that can be read *with both eyes open.* It gives *Binocular Vision.*

It supplies a thermometer with DOUBLE the angle of vision—with two to five times the visibility of previous thermometers. And does it without sacrificing high magnification.

It eliminates bore reflection, which has been one of the greatest handicaps in making accurate readings on any thermometer up to now.

All of these amazing advantages result from correct application of the principles of light reflection. A lens of triple construction assures the wider angle of vision, greater concentration of light, and the necessary light reflection on the mercury column. In other words, it gives a thermometer that is many times easier to read.

Prove for yourself the things we have said in this advertisement. A Taylor Representative will let you make a test with your own eyes so, that you can be the judge.

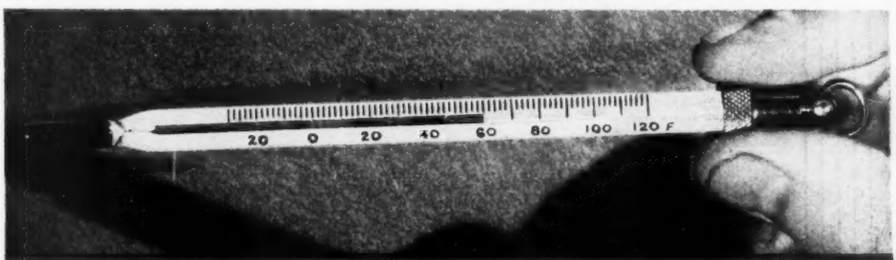
If you want a demonstration quickly, write at once to Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada.

Taylor

INDUSTRIAL THERMOMETERS

with "BINOC" tubing

REG. U. S. PAT. OFF.



TEST "BINOC" IN YOUR OWN THERMOMETER

BE ONE of the first to get this New Taylor Engineer's Pocket Test Thermometer with "BINOC" Tubing. It is offered to you to make your own easy-reading tests. You'll find it convenient to use in scores of places. Range; 0° to 220° F. or −30° to 120° F. Fill out coupon and order the range you want. Send check or money order.

TAYLOR INSTRUMENT COMPANIES,
Dept. D-2, Industrial Sales, Rochester, N. Y.

I want to see "BINOC" Tubing. I enclose check for the Engineer's Pocket Test Thermometers (with protective case).

CHECK HERE WITH RANGE −30° to 120° F—$1.25 EACH ☐
WITH RANGE 0° to 220° F—$1.50 EACH ☐

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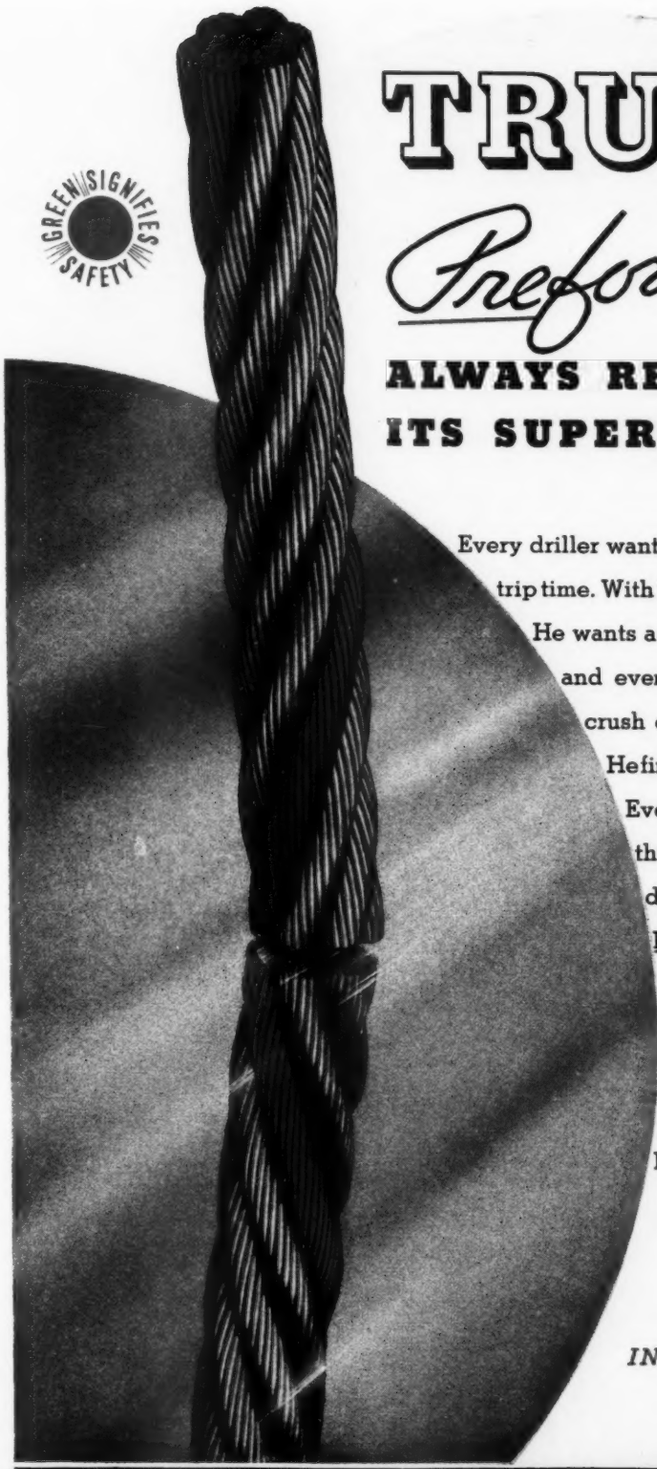

TRU·LAY *Preformed*

ALWAYS REFLECTS ITS SUPERIORITY . . . .

Every driller wants to cut down his non-productive round-trip time. With TRU-LAY Preformed Rotary Lines—he can. He wants a line that is easily handled, spools tightly and evenly, resists kinking and whipping, doesn't crush on the drum, returns the idle block faster. He finds all these qualities in TRU-LAY Preformed. Every operator wants a line that lasts longer, thus reducing replacement, labor and shut-down costs. He finds it in TRU-LAY Preformed.

It is in the hard, grueling service of rotary drilling that TRU-LAY Preformed reflects its all-around superiority. Specify TRU-LAY Preformed I. P. S. (Improved Plow Steel).

AMERICAN CABLE COMPANY, Inc.
Wilkes-Barre, Pennsylvania
An Associate Company of
American Chain Company, Inc.

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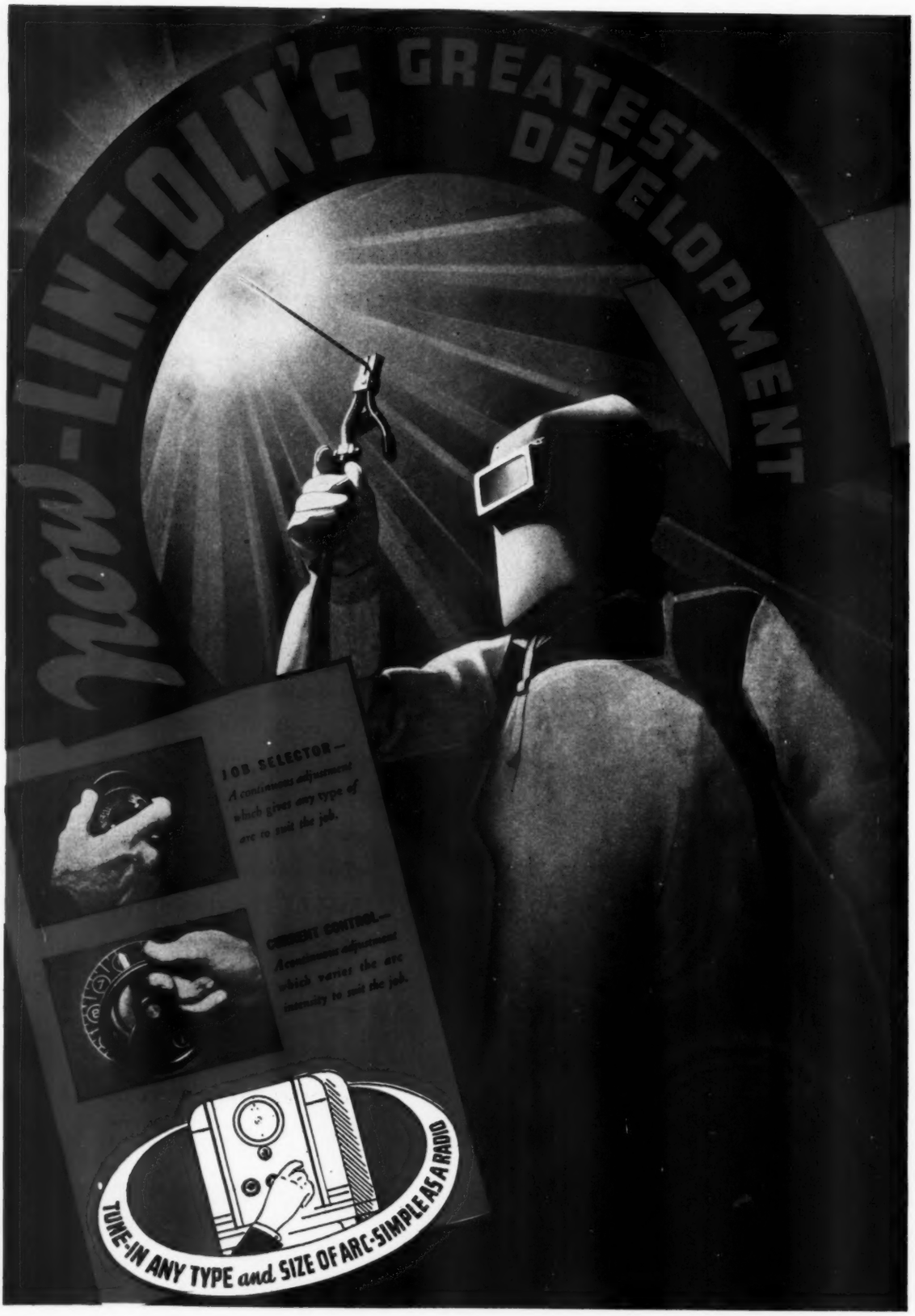
Branches or Distributors
in all Oil Field Centers

TRU-LAY *Preformed* Rotary Lines

ALL AMERICAN CABLE COMPANY LINES MADE OF IMPROVED PLOW STEEL ARE IDENTIFIED BY THE EMERALD STRAND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JOB SELECTOR—
A continuous adjustment which gives any type of arc to suit the job.
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A continuous adjustment which varies the arc intensity to suit the job.
TUNE-IN ANY TYPE and SIZE OF ARC-SIMPLE AS A RADIO

DUAL *Continuous* CONTROL

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"SHIELD-ARC S. A. E." *Welder*

WHEN you simplify and speed-up welding, you increase the dividends it pays. When you improve the quality of your welding, you make the product more desirable . . . When you give the welding operator the sharply-tuned arc each particular job NEEDS, you have paved the way for these benefits.

These results are now available!

Three years of intensive development work in Lincoln laboratories, supplemented by a year of thorough and diversified field-usage, have produced a vastly improved welding machine . . . one that is far ahead of anything else!

Now, with the ease of tuning-in a modern radio, welders can select *any type of arc for each and every value of welding current* . . . assuring the *right arc* for every job . . . *everytime.* This new convenience, DUAL *Continuous* CONTROL on the New *"Shield-Arc* S. A. E." Welder, improves the speed, quality and ease of welding.

A book has been carefully compiled to give the executive, the engineer and the shop man the facts each should know to be abreast of this development which will sweep into every shop, mill, mine and construction project. This book is replete with illustrations, curves of performance, comparisons with general practice. The coupon will bring a personal copy to your desk. THE LINCOLN ELECTRIC COMPANY, Dept. N314, Cleveland, Ohio. Largest Manufacturers of Arc Welding Equipment in the World.

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